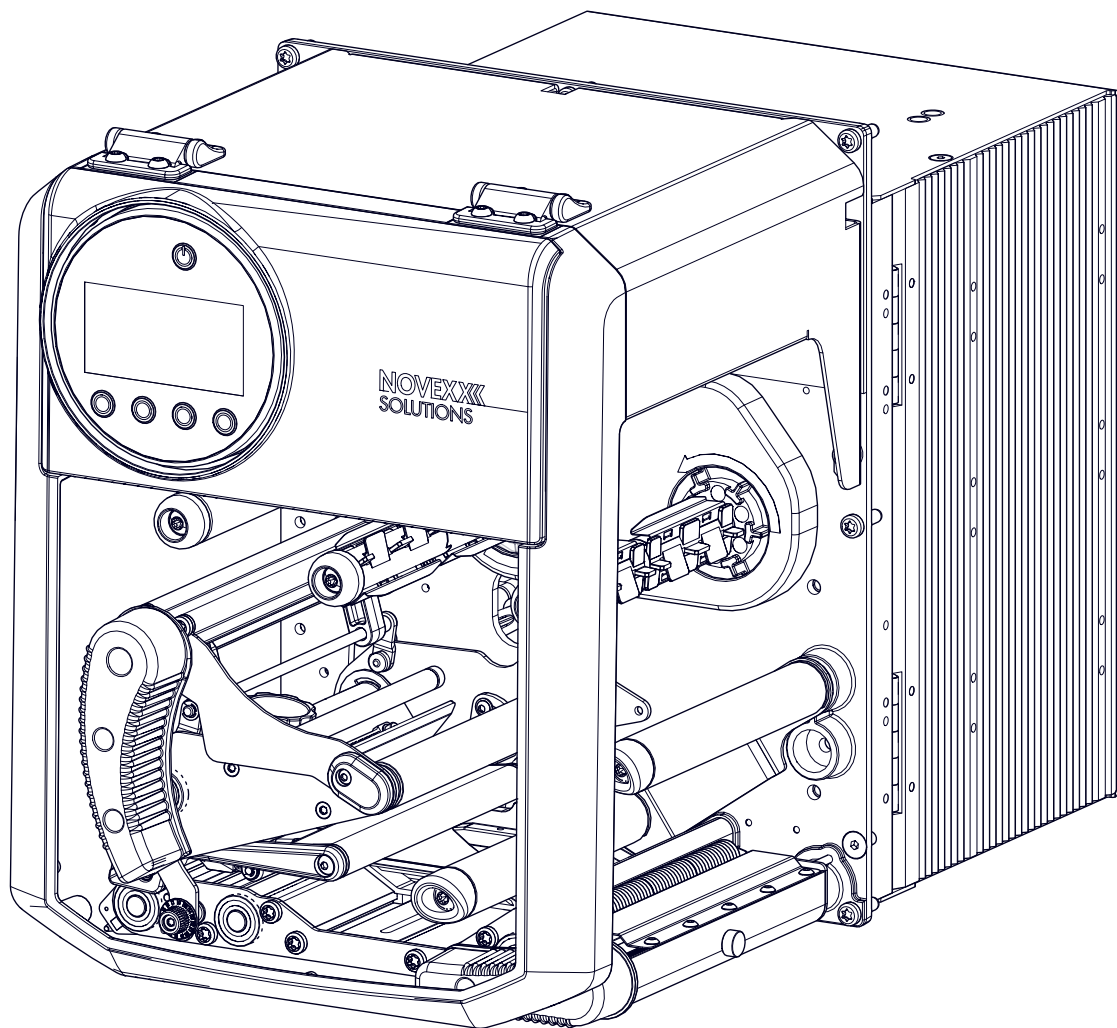


INSTALLATION MANUAL

XPM/XDM 94x

Print-/Print-Dispense Modules



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Please note!

GENERAL NOTES

Validity of this manual and required compliance

Contents

The complete operating manual for the print modules XPM 944, XPM 945, XPM 946 and the print-dispense modules XDM 944, XDM 945, XDM 946 (referred to in the following as “XDM 94x”, “XPM 94x”, “machine” or “printer”) consists of the following parts:

Manual	Target group	Medium	Availability
User manual	Operating personnel	PDF file	NOVEXX Solutions web page www.novexx.com
Installation manual	System integrator, service personnel		
Service manual	Service personnel		NOVEXX Solutions Partner Portal http://partner.novexx.com ^[1]
Manual “How-to-RFID with printers from Novexx Solutions” ^[2]			
Spare part catalog			

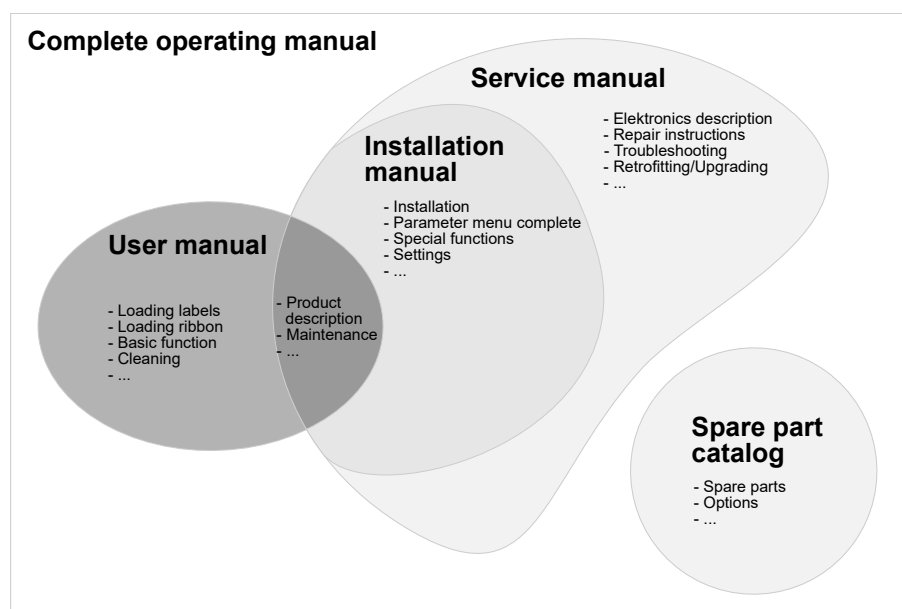


Fig. 1: Overview (schematic) of the contents of the individual manuals in the operating manual.

The present installation manual refers exclusively to the machine types listed above. It is to be referred to for correct installation, setup and adjustment of the machine.

¹ Access only for registered partners of NOVEXX Solutions.

² Only for machines with RFID option.

Technical release

Technical release: 6/2026

Firmware version: BEL-V8.2

Technical release with RFID option

Technical release: 6/2026

Firmware version: BEL-V8.T24584

 With this firmware version, the RFID option is released for the following countries: USA, Canada.

Liability

NOVEXX Solutions assumes no liability for damages resulting from improper installation or adjustments of the machine. It is assumed that only knowledgeable and appropriately qualified persons are to perform installation.

For Information about the required qualification, refer to chapter **Information and Qualification** on page 7.

Copyright

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www.novexx.com

How information is represented

Explanation of symbols

To enhance readability and make information easier to find, different types of information are identified:

► Instruction with no order of tasks assigned

1. Numbered instructions introduced by preceding text

2. The specified order must be followed!

 Note.

- Enumeration of features
- Other feature



The Experts symbol identifies activities that are reserved exclusively for qualified and specially trained personnel.

Warning Notes

Warning notes are specially highlighted:



WARNING!

Warning notes with the signal word WARNING refer to risks that can result in severe or fatal injuries! The note contains safety measures to protect affected persons.

► Instructions must be followed without exception.

CAUTION!

Warning notes with the signal word CAUTION refer to risks that can result in property damage or personal injury (minor injuries). The note contains instructions for preventing damage.

► Instructions must be followed without exception.

Illustrations

Illustrations appear in the text where required. References to the illustrations are shown in brackets, if necessary (see table).

Reference to illustration	Application
none	• Only one illustration • Reference to the illustration is obvious • No position number in the illustration
(A)	• Only one illustration • Reference to the illustration is obvious • Position number in the illustration
(see fig. above)	• Several illustrations • No position number in the illustration
(see fig. above, pos. A)	• Several illustrations • Position number(s) in the illustration

Table 1: Different references to illustrations.

Parameters

Parameters in the parameter menu are represented in the format Menu name > Parameter name in grey type.

SAFETY INSTRUCTIONS

Information and Qualification

Ensuring the Necessary Qualification

► Only fully trained and authorised personnel are permitted to operate, adjust and maintain the machine.

- Service work must only be performed by qualified and appropriately trained technical specialists (service technicians) or the customer service department.

Qualification for System Integrators and Service Technicians (brief: service personnel)

Knowledge required to install the print & apply system and perform service work must be demonstrated through appropriate qualification. Only service personnel with technical training are able to assess the tasks to be performed and recognise potential dangers.

- Knowledge acquired through technical training in mechanics and electronics (for example in Germany the training to become a mechatronics engineer).
- Participation in a technical training course for the corresponding print & apply system offered by the manufacturer.
- The service personnel must be acquainted with the functionality of the print & apply system.
- The system integrator must be acquainted with the functionality of the system into which the label dispenser is being integrated.

Tasks	System integrator	Operator	Service technician
Mount the machine	X		
Connect	X		
Make settings	X		
Switch on/off	X	X	X
Insert/change material/ribbon	X	X	X
Application-related settings	X	X	X
Rectify minor operating faults ^[3]	X	X	X
Clean the machine		X	X
Rectify major operating faults ^[4]			X
Settings to the electronics/ mechanics			X
Repairs			X
 Manual:	Service Manual, Installation Manual	Operating Manual	Service Manual, Spare Parts Catalog

Making Note of Information

The machine can only be operated safely and efficiently by complying with all of the requisite information!

- Before beginning operation, read this operating manual and follow all of the instructions.
- Observe all additional safety and warning information given on the machine.
- Only technically knowledgeable persons are permitted to operate the machine and make settings on it.

Examples: Work place regulation, Accident prevention regulations, Trade union regulations for occupational safety and health, Equipment safety law, Recycling and waste management law.

³ For example faults when detecting labels

⁴ For example incorrect labelling

Information must be made available

This service manual

- ▶ must be made available to all persons who are entrusted with installing, setting up, adjusting, or repairing the labeller.
- ▶ Safety and warning notices attached to the labeller must be kept clean and legible. Missing or damaged warning plates are to be replaced.

Operating Safety of the Machine**Transportation**

- ▶ Only use the original packaging for machine transportation.
- ▶ Keep the original packaging for machine transportation.
- ▶ Never hold the machine by the front cover. Instead, hold the machine by its (metal) casing.

Installation and Maintenance**WARNING!**

Improper usage of the machine can lead to accidents, material damage and loss of production!

- ▶ When installing the labeller, check for visible shipment damage. Immediately inform NOVEXX Solutions of any damage.
- ▶ When installing the machine on a support stand, make sure that it can not tip over.
- ▶ Only put the machine into operation if it is in flawless condition.
- ▶ Only perform alterations or conversions to the machine with the consent of NOVEXX Solutions' customer service.
- ▶ Only use original replacement parts.

Before starting up the machine:

- ▶ Carry out test runs using the task-specific settings under near production conditions.
- ▶ Only put the machine into operation after at least one successful test run has been completed.

After all servicing or repair work**WARNING!**

Risk of an accident due to moving or loose parts!

- ▶ Re-install all covers and safety equipment.
- ▶ Check for firm seating of all screw connections that were loosened during the work.
- ▶ Remove all tools and other aids used during service and repair from the working area of the labeller.
- ▶ Verify flawless functioning of all safety equipment.

**WARNING!**

This unit operates at mains voltage! Coming into contact with electrically live components can cause potentially lethal electrical shocks and burns.

- After assembling, check the printer according to the regulations relevant in your country.

Safe Operation

Protect against injuries that can result from electrical current

**WARNING!**

Contact with energised components can result in life-endangering currents through the body as well as burns. The label dispenser is connected with the mains supply!

- Only allow work on the electronics system to be done by authorised electronics technicians.
- Observe the following information unconditionally.

- *Before any repair work:*
 - Detach the machine from power supply.
 - Check to ensure it is de-energised.
 - Secure the power supply against unintentional or unauthorised switch-on.
- *If the machine must be switched on while the casing is open for repair or inspection:*
 - Never touch energised components. This also applies to components with low voltages.
- *Ensure the flawless condition of the electrical system:*
 - Regularly check the electrical equipment.
 - Only connect the machine to other machines if these meet the requirements for an ES1-circuit, in accordance with EN 62368-1.
 - Re-tighten loose connections.
 - Immediately replace damaged lines.
 - After assembling, check the printer according to the regulations relevant in your country (e. g. in Germany: DIN EN 50678 VDE 0701 „General procedure for verifying the effectiveness of the protective measures of electrical equipment after repair“).
- *Power connection:*
 - If the power switch is not accessible due to the installation position of the machine, a suitable separator has to be provided by the system integrator.

Product Description

TECHNICAL DATA

Dimensions | Connection Data | Ambient Conditions

Dimensions

- Dimensions (H x W x D)
 - XDM/XPM 944: 310 x 245 x 415 mm
 - XDM/XPM 945/946: 310 x 245 x 476 mm
- Weight:
 - XDM 944: 17 kg
 - XDM/XPM 945/946: 20 kg

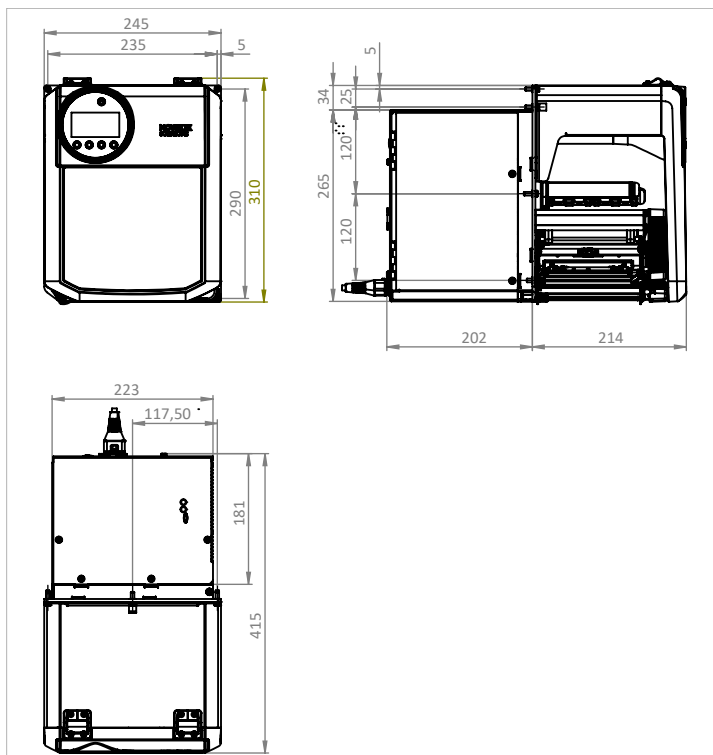


Fig. 2: Dimensions of the XDM 944 LH.

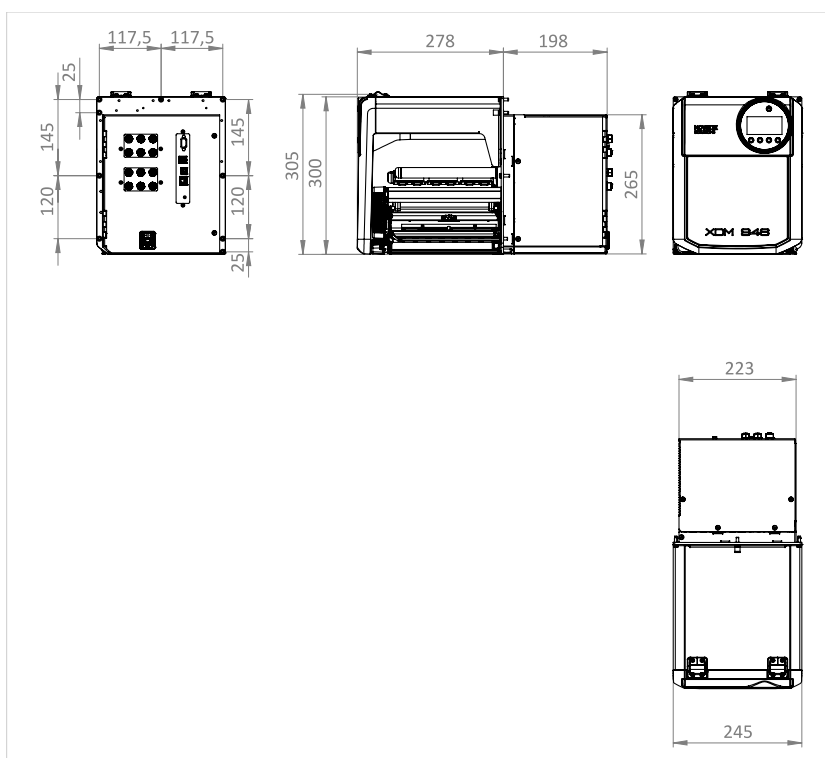


Fig. 3: Dimensions of the XDM 946 RH.

Connection data

Protection category	I
Mains voltage	100 -240 V (AC)
Input current	3.9 - 1.9 A
Mains frequency	60 /50 Hz

Ambient conditions

Installation location	• Inside buildings • Protected from wind and spray water • Dry • Not in areas with potentially explosive atmosphere
Operating Temperature	+5 to +40°C
Storage Temperature	-20 to +70°C
Relative Humidity	20 to 85%, non-condensing
Protection category	IP 21
Noise	< 72 dB(A)
Sea level	Operation to max. 2000 m above sea level Transportation to max. 8000 m above sea level

Label Material

Material types

Self-adhesive, punched labels on backing material.

Thermal direct material, thermal transfer material, plastic ribbon: PE, PP, PVC, PA in rolls.

! The following material types are suitable for the XDM/XPM 94x with (optional) clear label sensor:

- *Transparent labels* on transparent or non-transparent backing material.
- *Metallized labels* (fully or partially): Whether the respective label layout is recognized must always be tested beforehand.
- *Shape* of the labels: The highest imprint accuracy is achieved with rectangular labels. The imprint accuracy is lower with non-rectangular labels (e.g. round labels). It must be tested before use whether the desired imprint accuracy is achieved.
- (XPM 94x only) *Very small labels*: In Real 1:1 operation, the printing accuracy of narrow (<40 mm) and short (<20 mm) labels may be impaired. It is recommended to test the label material before use.

All labels must have continuous label gaps (no punches).

Material weight

60-160 g/m²

Material thickness

Label materials suitable for printing with a standard XDM/XPM 94x are generally not so thick that this would be a limiting factor.

! XDM/XPM 94x with (optional) clear label sensor: max. 0.3 mm

Material measures

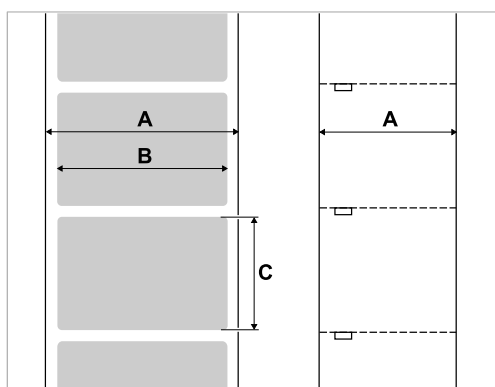


Fig. 4: Material measures (A Material width, B Label width, C Label length)

Machine	Material width	Label length
XDM/XPM 944	20 - 120 mm	10 - 2000 mm
XDM/XPM 945	20 - 185 mm	

Machine	Material width	Label length
XDM/XPM 946		

Table 2: Label measures.

Punch measures

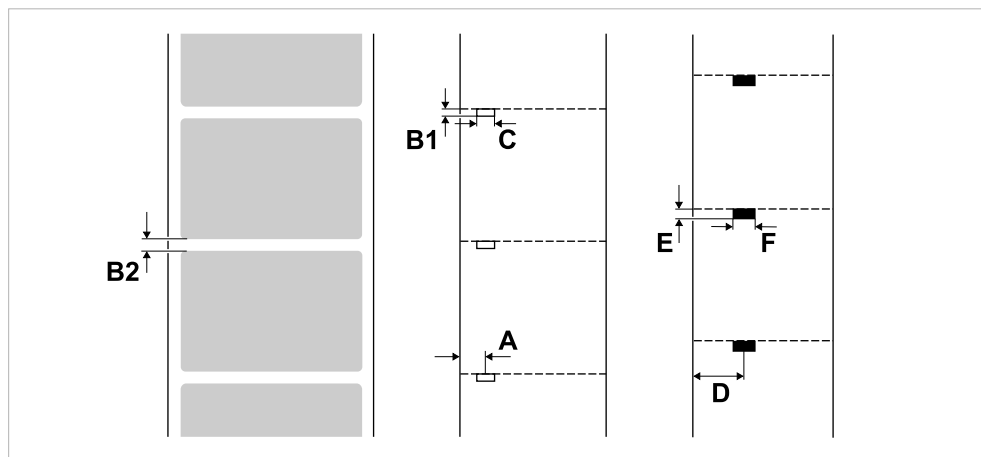


Fig. 5: Measures and positions of punches and reflex marks (A: Punch position, B: Punch length, C: Punch width, D: Reflex mark position, E: Reflex mark length, F: Reflex mark width).

	Length	Width	Position
Punch	0.8-14 mm (B1)	min. 4 mm (C)	XDM/XPM 944: 2-64 mm XDM/XPM 945/946: 2-96 mm
Gap	0.8-14 mm (B2) With clear label sensor: 2-14 mm	Label width	
Reflex mark	4 mm (E)	min. 12 mm (F)	

Table 3: Punch / Reflex mark measures

RFID labels

RFID labels must meet the same specifications as “normal” labels.

The transponders in the RFID tags must meet the following requirements:

- *Frequency range*: 860-930 MHz (UHF)
- *Transponder type*: EPC Class 1 Gen2

Thermal transfer ribbon

Ribbon type

Regarding thermotransfer ribbon, the following is recommended:

- the reverse side of the ribbon must have an antistatic, friction-reducing coating (backcoating).
- ribbons must be specified for corner edge type print heads.
- ribbons should be suitable for print speeds of up to the max. print speed of the machine.

Ribbon roll

Variable	Dimension
Outer Ø	max. 85 mm ^[5]
Core inside Ø	25.4 mm (1")
Width ^[6]	XDM/XPM 944: 25 -110 mm XDM/XPM 945: 30-132 mm XDM/XPM 946: 30-164 mm

Table 4: Dimensions of usable ribbon rolls.

Performance Data**Print head**

- *Print technology:* Thermal direct or thermal transfer printing
- *Print head type:* Corner Edge
- *Print head characteristics:*

Machine	Resolution (Dot/mm)	Resolution (dpi)	Print width (mm)
XDM/XPM 944	12.0	300	106.6
XDM/XPM 945			128.0
XDM/XPM 946			160.0

Print speed

Machine	Print speed (mm/s)	Print speed (inch/s)
XDM/XPM 944	100-400	4-16
XDM/XPM 945	100-350	4-14
XDM/XPM 946	100-300	4-12

Impression accuracy

- In printing (y-) direction:

The impression accuracy depends on the print position. With the printout starting directly at the punch position, the accuracy is ± 0.5 mm. A distance between punch (that is label start) and print position will add $\pm 1\%$ of this distance to the accuracy fault (fig. below)

- X-direction: ± 0.5 mm

⁵ Corresponds to 600 m standard ribbon type NOVEXX 10287-600-140-10.

⁶ As a general rule, the thermal transfer ribbon must overlap the label being printed on both sides by 2 mm.

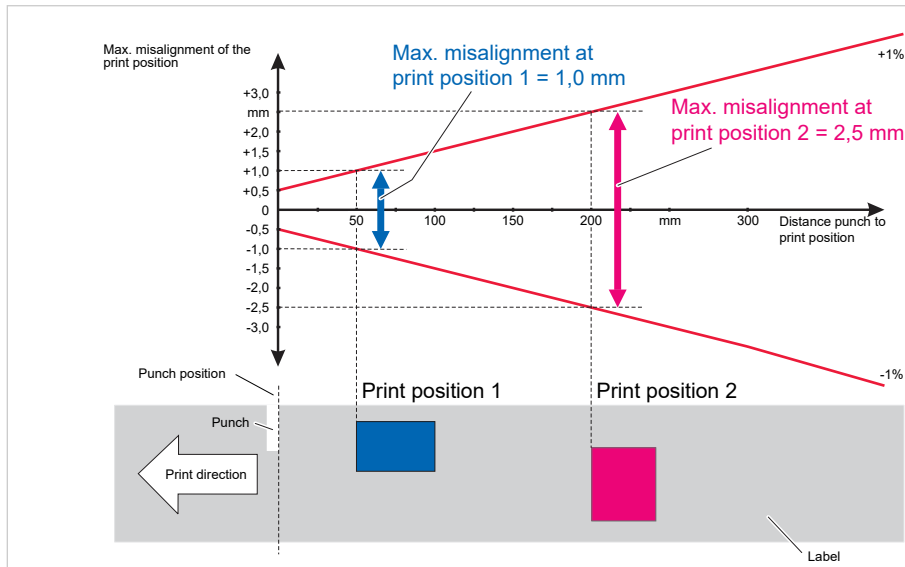


Fig. 6: Impression accuracy in printing direction, depending on the printing position.

Label sensor

- Standard: *Light-transmission* sensor for punched label material
- Option: *Combined sensor* with Light-transmission sensor for punched label material and reflex sensor for label material with reflex marks on the bottom side

! One of the two label sensors is activated in the parameter menu.

- Option: Clear label sensor

! Is fitted in addition to the standard transmission sensor and can be optionally activated in the parameter menu.

- Setting range:

- XDM/XPM 944: 2-64 mm
- XDM/XPM 945/946,XPCU: 2-96 mm

Punch position and size see chapter “**Punch measures**” on page 14.

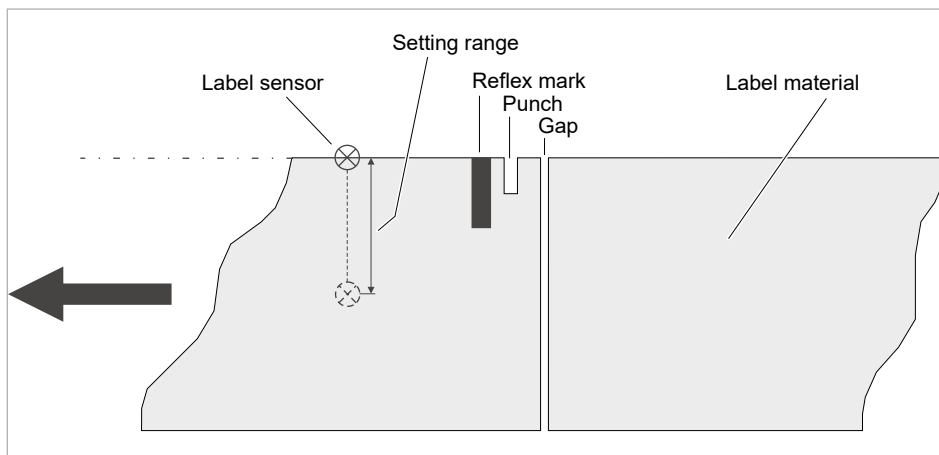


Fig. 7: Adjustment range of the label sensor.

Output modes

1:1 and 100% printable.

Non-printable areas:

- 1 mm from the front label edge (1st edge in feed direction)
- 1 mm from the left band border (right border in feed direction)

Interpreter

Easy Plug, Line Printer, Hex Dump, ZPL

Character sets

- 17 character sets with fixed size (fixedfonts) including OCR-A and OCR-B
- 3 Scalable character set (speedo fonts)
- TrueType character sets are supported (in Unicode as well)
- TrueType, speedo and fixed size fonts can be optionally stored on an external memory medium.

Character modification

- Scaling in X/Y direction
 - Fixfonts up to factor 16
 - Speedo fonts up to 6000 pt
- Rotation:
 - Resident fonts, bar codes, lines and graphics: 0, 90, 180, 270 degrees
 - Truetype fonts: 0 to 359.9 degrees

Bar codes

Codabar	Code 128 A, B, C
Code 128	Code 128 UPS
Code 128 Pharmacy	ITF
Code 2/5 Matrix	MSI
Code 2/5 Interleaved	EAN 8
Code 2/5 5-line	EAN 13 add-on 2
Code 2/5 Interleaved ratio 1:3	EAN 13 add-on 5
Code 2/5 Matrix ratio 1:2,5	EAN 128
Code 2/5 Matrix ratio 1:3	Postcode (guide and identity code)
Code 39	UPC A
Code 39 extended	UPC E
Code 39 ratio 2,5:1	Code 93
Code 39 ratio 3:1	

All bar codes scalable in 30 different width and in the height

2-dimensional bar codes

Aztec
Codablock F
Code 49
Data Matrix Code (code according to ECC200)
Maxi Code
PDF 417
QR Matrix Code

GS1 Databar & CC bar codes

Reduced Space Symbology (GS1 Databar) and Composite Component (CC) bar codes:

GS1 Databar-14	UPC-A + CC-A/CC-B
GS1 Databar-14 truncated	UPC-E + CC-A/CC-B
GS1 Databar-14 stacked	EAN 13 + CC-A/CC-B
GS1 Databar-14 stacked omnidirectional	EAN 8 + CC-A/CC-B
GS1 Databar limited	UCC/EAN 128 + CC-A/CC-B
GS1 Databar expanded	UCC/EAN 128 + CC-C

Interfaces & Electronics

Interfaces

- Data interfaces:
 - *Network*: Ethernet 10/100/1000
 - *USB host* (Typ A): USB 2.0
 - *USB device* (Typ B): USB 2.0, 2x
 - Serial: RS232, DSub 9
- Signal interfaces:
 - *Standard*: Connections for start sensor and signal beacon
 - *Optional*: Connections for applicators, machine status signals

Electronics

Characteristic	Details
Processor	32-bit ARM Cortex-A9 CPU (NXP)
RAM	1 GB DDR3
eMMC	2 GB pSLC
Realtime clock	Standard
Operating panel	• 4 buttons • 1 button for standby mode • LC graphics display with 128x64 pixels • RGB illuminated background • rotatable

Certificates and Markings

All design models

CE, TÜV-Mark, _CTÜV_{US}-Mark, FCC, EAC, CCC

The regulation EN 55032 demands for class A devices the following text to be printed in the manual:

„WARNING: This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.“

(Only printers with RFID) Notices required by the FCC

“Changes or modifications not expressly approved by the manufacturer could void the user’s authority to operate the equipment.”

“This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.”

FCC Interference Statement (Part 15.105 (b)):

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- ▶ Reorient or relocate the receiving antenna.
- ▶ Increase the separation between the equipment and receiver.
- ▶ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or an experienced radio/TV technician for help.

(Only printers with RFID) Information required under IC

“This device complies with *Industry Canada* licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.”

OPERATING PANEL

Display During Startup

Shortly after switching on the printer, during startup, the following informations show up on the screen:

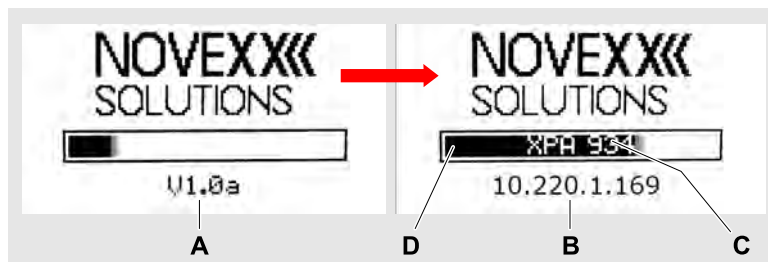


Fig. 8: Changing informations on the screen during startup: **A** Firmware version, **B** (Optional) IP address (if Ethernet is selected as data interface), **C** Printer type.



Fig. 9: Display "Ready" on the machine ready for operation.

Operating Controls

The operation panel of the XDM 94x consists of a graphic display and four keys below the display. The current functions of the keys are displayed by icons (B) above the keys.

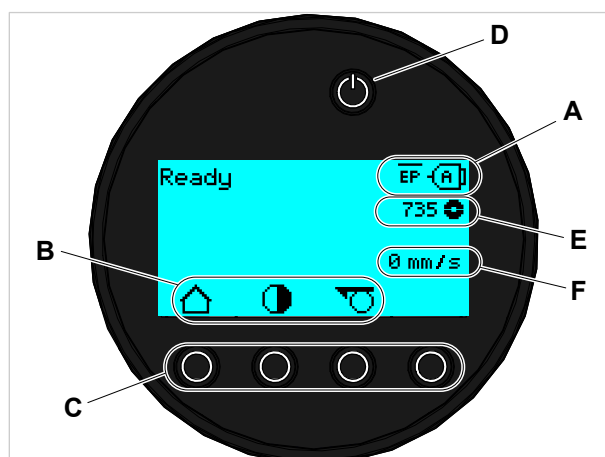


Fig. 10: Operation panel of the XDM 94x: **A** Icons that inform about the interface assignment, **B** Icons that show the key assignment, **C** Keys, **D** Standby key, **E** Remaining ribbon stock, **F** Conveyor belt speed display (with APSF function activated).

Operating Principle

The figure shows, how to toggle between the screens:

The displayed texts and icons are largely selfexplanatory. Based on the different background colors of the display, the state of the printer can be identified quickly:

Color	State	
Green	Printing	Normal operation, labels are being printed and applied
	Waiting for a start signal	• A print job has been transferred and interpreted <i>or</i> • The current print job was stopped In both cases, the machine is waiting for a start signal
Cyan	Home	Generally counts: Cyan => Need for action by the operator • The printer is <i>not</i> ready to receive print data • The interpreter has stopped • Error messages or warnings can <i>not</i> be displayed
	Stopped	• The current print job was stopped • The printer is ready to receive print data • The commands in the received print job are processed by the interpreter • Errors or warnings can be displayed
	Ready	• The printer is ready to receive print data • The commands in the received print job are processed by the interpreter • Errors or warnings can be displayed
White	Standalone	• Selection of a file on a storage medium • The printer works in the background, without updating the display • Selecting an input field and text input into the input field • Start printing; Errors caused by the print job are displayed
	Setup	• Settings in the parameter menu can be done • The printer is <i>not</i> ready to receive print data • The interpreter has stopped • Error messages or warnings can <i>not</i> be displayed
Red	Error	• An error occurred during the printing • The current print job is stopped • A status message is displayed with red background • The status message only disappears after pressing the acknowledgement key • The printer remains ready to receive print data if it was able to do so before the error occurred (exception: errors that prevent data communication) • The commands in the received print job are processed by the interpreter • Further errors can occur and, if so, are queued

Color	State	
Yellow	Warning	Same as “Error”, with the following differences: • The current print job is <i>not</i> stopped • The warning is displayed with yellow background • The warning disappears after some seconds

Table 5: Display colors and corresponding states

Icons

	<i>Home</i> : Toggle to the “Home” screen		<i>Start</i> : To start an operation, e. g. printing
	<i>Contrast</i> : Setting the print contrast during printing; Hidden, if only operator access rights exist		<i>Halt</i> : To stop an operation, e. g. printing
	<i>Printing</i> : Toggle to the „Ready“ screen	1	<i>Keys 1-4</i> : For typing in of key codes, the keys are numbered from left to right
	<i>Out</i> : Jump to the next higher menu level; Hold the button pressed: jump to the highest menu level	2	
	<i>In</i> : Opening a menu	3	
	<i>Applicator</i> : Triggers one stroke of the applicator, if present	4	
	<i>Acknowledgement</i> : Acknowledgement, e. g. of an input or an error message		<i>Cancel</i> : Leaving the dialog without applying the setting
	<i>Left/Right</i> : Move the marker in the text input dialog to the left or right		<i>Up/Down</i> : Move the selection bar upwards or downwards
			
	<i>Reprint</i> : Triggers the reprint of the preceding label, if the function is activated		<i>Up to first</i> : Moves the bar in the selection list to the first position
	<i>Delete</i> : Deletes the character left of the marker in the text input dialog		<i>Parameter</i> : Call parameter
	<i>Character selection</i> : Selecting a character in the text input dialog		<i>Feed</i> : Trigger material feeding
	<i>Start signal</i> : Input of a start signal by hand in single start mode		<i>Info</i> : Call a purely informative menu item
	<i>Setting</i> : Toggle to the „Setting“ screen		<i>Plus/Minus</i> : Increase/decrease a value in an input field
	<i>Right</i> : Move one input field further to the right (when typing in values that consist of several fields, e. g. time)		
			Setting of the <i>print head pressure</i>
	Jump to the <i>Dispense Settings</i> screen; Hidden, if only operator access rights exist		<i>Dispense position</i> : Quick access to parameter Dispenser > Dispenseposition
	<i>Start Offset</i> : Quick access to parameter Dispenser > Start Signal > Start offset		<i>Bar code</i> : appears for frequently occurring error messages; Press the key to call up the QR code that refers to the quick troubleshooting guide

Table 6: Those icons inform about the function of the key below the icon

	<i>Ethernet active</i> : The network interface is selected for data transfer and a connection could be established ^[7]		<i>Ethernet inactive</i> : The network interface is selected for data transfer and a connection could <i>not</i> be established
	<i>USB</i> : The USB interface is selected for data transfer ^[7]		<i>Auto interface</i> : The data interface is selected automatically ^[7]
	<i>Serial</i> : The serial interface is selected for data transfer ^[7]		<i>Caution</i> : Warning sign which marks error messages
	<i>Filter</i> : The filter function for file names is active (standalone mode)		<i>Ribbon stock</i> : Shows together with the number left of it the remaining ribbon length in meters.
	<i>Print interpreter</i> setting: Parameter Printer Language > Print Interpret. is set to “Easy-plug” ^[8]		<i>Print interpreter</i> setting: Parameter Printer Language > Print Interpret. is set to “Easy-Plug/ZPL Emu” ^[8]
	<i>Print interpreter</i> setting: Parameter Printer Language > Print Interpret. is set to “ZPL Emulation” ^[8]		<i>Print interpreter</i> setting: Parameter Printer Language > Print Interpret. is set to “Lineprinter” ^[8]
	<i>Print interpreter</i> setting: Parameter Printer Language > Print Interpret. is set to “Hex-dump” ^[8]		<i>USB thumb drive</i> : A USB thumb drive is connected and assigned to drive C:
	<i>XApp</i> : A XApp is active		

Table 7: Those icons inform about printer states

Key Combinations

Printer state	Key combination	Function
“Home” screen	1+3+4	Enter access code, see chapter Access authoriz. on page 80
	3+4	Measuring the label pitch automatically, see user manual, chapter “Operation” > “Setting and Monitoring” > “Settings in the Parameter Menu”
	2+3	Slow material feed
	1+2	Eject material (backwards)
Always	1+2+3	Reset
	2+4	

Table 8: Special key combinations.

⁷ Icon flashes during print data transfer

⁸ Icon flashes during print interpreter activity.

Data input at the operation panel

Describes in general terms the input of data at the control panel, which may be required in various environments.

About this task

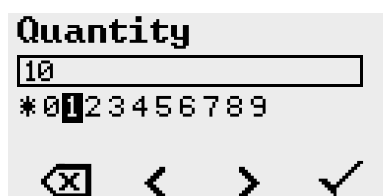
Data entry at the operation panel is required in the following cases, for example:

- Filling in data fields in standalone mode
- Entering a file name when creating a setup file
- Definition of a password

Data entry always starts by pressing the  key below the symbol. The following describes data entry using the example of quantity input for a print job in standalone mode.

Procedure

1. Press the  key.



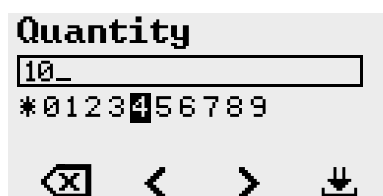
 Press the key  to accept the entry unchanged.

Deleting characters:

2. Press key  to delete characters in the input line from right to left.
3. Press key  2x to confirm the change.

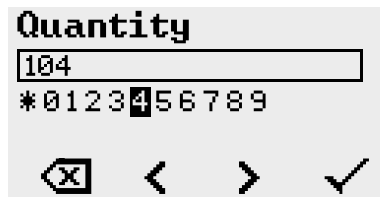
Adding characters:

4. Press one of the keys  or .
- A cursor appears in the input field:



5. Use the  or  keys to select the desired character (in the picture the "4").

6. Press key  to transfer the selected character to the input field:



7. Repeat steps 4 to 6 until all desired characters are entered.
8. Press the key  2x to accept the change, or press  after the first confirmation to cancel the entry.

Related tasks

[Save all machine settings](#) on page 177

[Selecting Files from an External Memory Medium](#) on page 162

WEB PANEL

Web panel - what's that?



Video "Web Interface".

The web panel is a comfortable external control panel, which can be operated on mobile or stationary computing devices. The web panel is supported by the following machines:

- Print & Apply Systems XPA 93x, XPA 94x, XDM 94x, XPM 94x
- Label printers XLP 60x, XLP 51x, XTP 60x

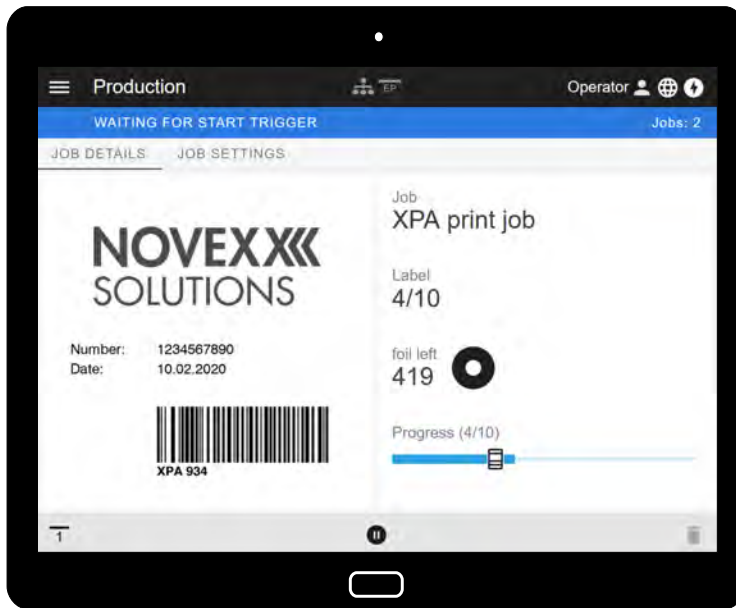


Fig. 11: Display of a print job in process with the web panel on a tablet computer.

Prerequisites

- Display device, e.g. smartphone, tablet computer, PC
- Web browser on the display device
- Connection to the same network to which the machine is connected
- Web server of the machine is activated: Interface > Network > Services > WEB server = "On"

Functions

- *Production monitoring*: Display of running print jobs (see figure above)
- *Machine settings*: Settings in the parameter menu
- *Administration*: Save machine settings; save support data; update firmware; etc.



Login: In order to use the functions of the web panel, the user must log in - with one of the roles Operator, Supervisor or Service. Depending on the role selected, more or less functions are accessible.

The same machine can be accessed from multiple web panels, and the web panels can have different language settings.

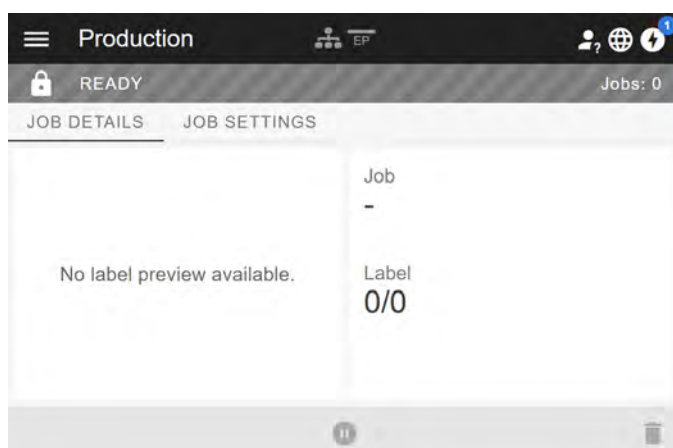
Starting the web panel

Procedure

1. Determine the IP address of the machine.

! The IP address is displayed on the operation panel during machine startup. Alternatively, select the following parameter from the menu: Interface > Network > IP address.

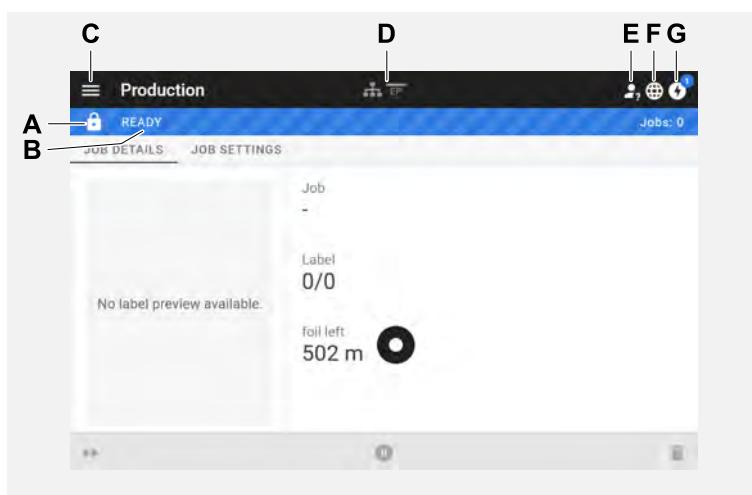
2. Switch on the display device and open the web browser.
3. Enter the IP address in the URL input line of the web browser.
The following display appears:



Related tasks

[Access to the web panel via Wi-Fi](#) on page 184

Display after the start



Pos. no.	Function
A	<i>Lock symbol:</i> No one has logged in yet (pos. E), so most functions are locked. Only the print job details display (middle area of the window with light background) and the message display (pos. G) are accessible.
B	<i>Infotext:</i> Display of different operating states of the machine with different background colours • READY: Appears when the control panel on the machine displays "Ready". • USER AT MACHINE: Appears when the control panel on the machine displays "Home". At the same time the lock symbol (pos. A) appears and the web panel is locked. This prevents the machine from being started from the web panel while someone is working on the machine (safety function). • ERROR: An unconfirmed error message is present. • WAITING FOR START TRIGGER: The machine is waiting for a start signal . • PRINTING...: The machine is printing
C	<i>Menu:</i> Choose here between the views "Production", "Machine settings" and "Administration". More details are given in the following chapters.
D	<i>Icons</i> that inform about the status of the machine, for more details see link to chapter "Icons" below. The figure above shows, for example, the icons for network connection and Easy Plug emulation.
E	<i>Login:</i> In order to use the functions of the web panel, the user must log in - with one of the roles Operator, Supervisor or Service. Depending on the role selected, more or less functions are accessible.  Preset key code for the role Operator: 1-1-3-2
F	<i>Language selection:</i> The language set on the machine is preset. By clicking on the icon, another language can be selected for the web panel.
G	<i>Notifications:</i> Display notifications, such as error messages and warnings. See the following chapters for more details.

Related reference

Key combinations and key codes for service on page 280

“Notifications” view

On the web panel 3 types of notifications are displayed: Error messages, warnings and information.

Error messages

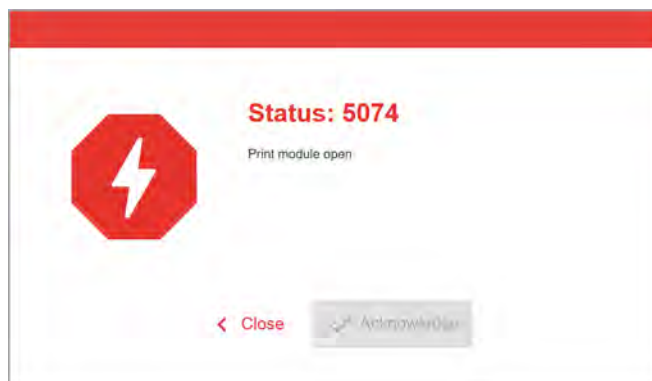


Fig. 12: Error messages that require a reaction from the operator are displayed in full. Status number and status text match the display on the machine operating panel. The message can be confirmed either on the web panel or the machine operating panel.

The Notification View

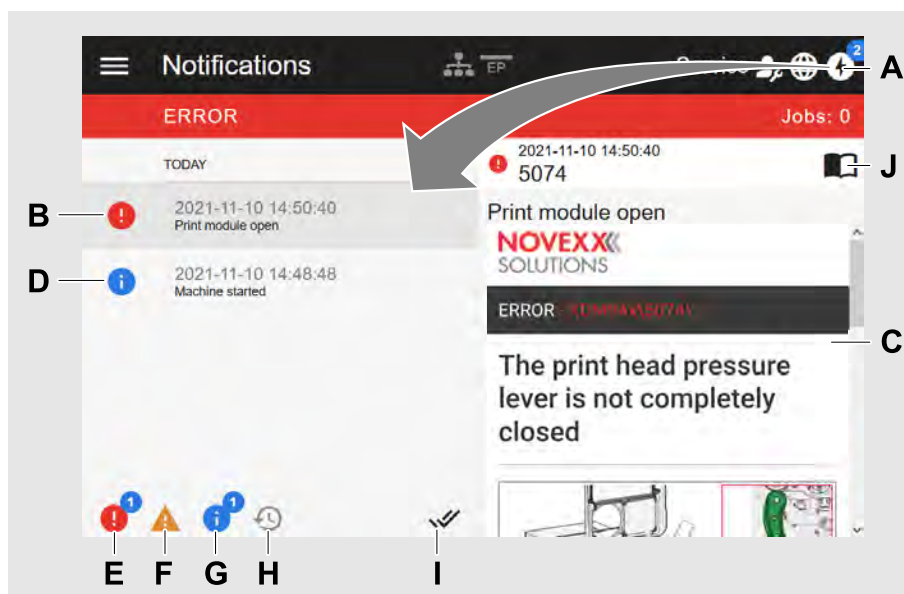


Fig. 13: After clicking on the notification icon (A), the notification view opens. The left half shows the notification history, the right half shows an explanation of the selected entry in the history.

Pos. no.	Function
A	<i>Notification icon:</i> Click on the icon to open the notification view. The superscript number indicates the number of unconfirmed notifications.

Pos. no.	Function
B	<i>Error message</i> in the history with timestamp. An explanation of the selected entry appears on the right. If there is a quick guide to correct the error message, it is displayed (C).
C	<i>Quick guide</i> to the error message, if available (Corresponds to the quick guide that can be accessed via a QR code from the machine operating panel)..
D	<i>Info message</i> in the history with time stamp.
E	<i>Filter for error messages</i> : Click on the icon to hide error messages from the list
F	<i>Filter for warnings</i> : Click on the icon to hide warnings from the list
G	<i>Filter for info messages</i> : Click on the icon to hide info messages from the list
H	<i>History</i> : Click on the icon to display the notification history. The history shows all notifications that have already been confirmed.
I	<i>Confirm everything</i> : Click on the icon to confirm all unconfirmed notifications. Confirmed notifications only appear in the history.
J	Manual symbol: Click on the icon to access the detailed user manual of the machine.

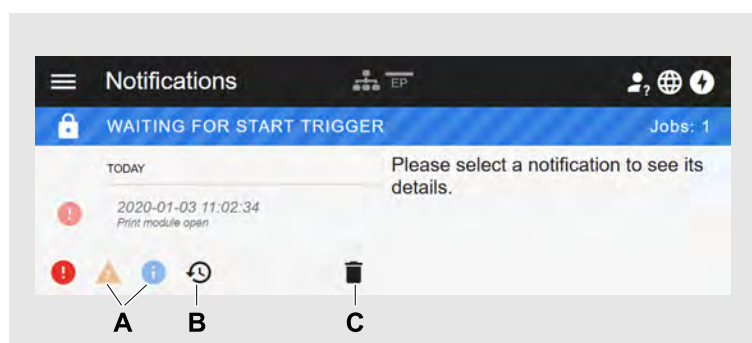


Fig. 14: Notification view with history.

Pos. no.	Function
A	The filters for warnings and info messages are set. The icons are displayed pale and all warnings and info messages are hidden.
B	History is displayed (symbol is black, otherwise grey).
C	Trashcan icon: Only appears when history is displayed. Clicking on the icon deletes the history.

Exiting the notification view:

- Click on “Notifications” in the header.

The web panel switches to the production view.

“Production” view

In the production view, the print job in progress can be monitored and settings can be made for the print job.

“Job details” view



Fig. 15: “Job details” view of a print job in the web panel.

Pos. no.	Function
A	Number of compiled print jobs
B	Name of the current print job (defined in the Easy Plug command #ER)
C	Label layout of the current print job
D	Progress display of the current print job (4 of 10 labels were printed)
E	Display of the remaining ribbon in meters
F	<i>Trashcan icon:</i> Click to delete the print job (requires at least supervisor role, in the figure the icon is grayed out, i.e. the function is not available with the current role)
G	<i>Stop or Start icon:</i> Click to stop or start the print job
H	<i>Start signal icon:</i> Click to print and dispense a label

“Job Settings” view

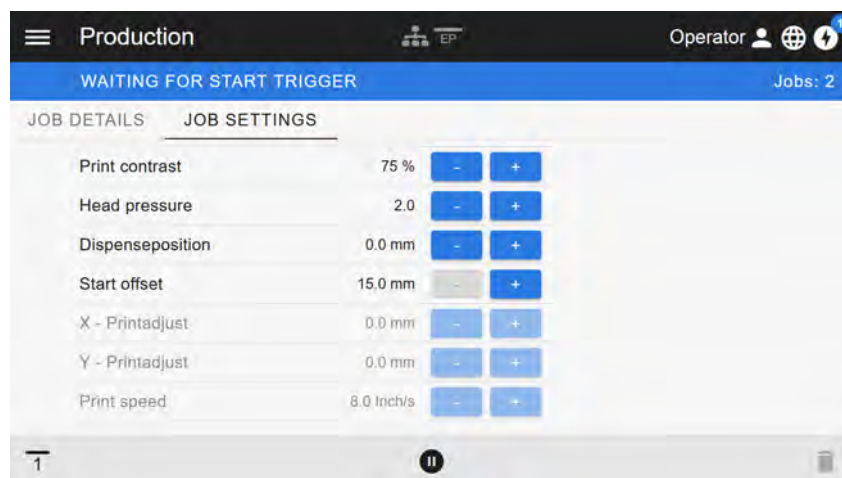


Fig. 16: View “Job Settings” of a print job in the web panel. Settings not accessible with the active role (here: “Operator”) are greyed out. The other settings can be changed by clicking on “+” or “-”.

“Machine settings” view

Main menu

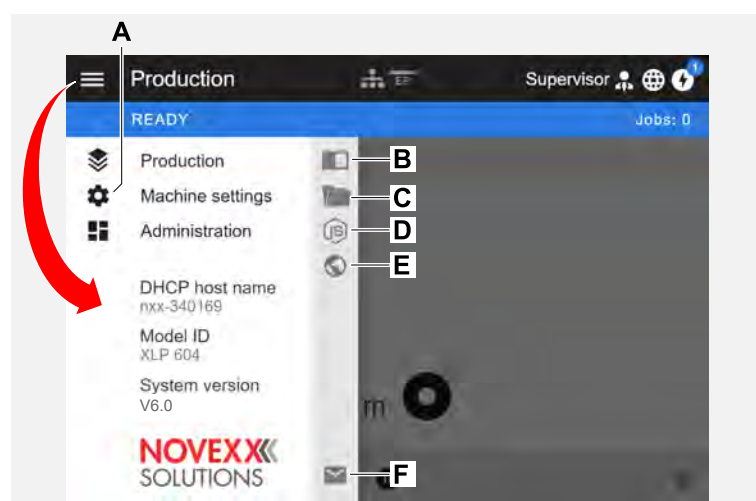


Fig. 17: View after clicking on the menu icon in the upper left corner.

Pos. no.	Function
A	Open machine settings (see following chapter)
B	Opens the user manual
C	Opens the file manager (see chapter Memory access with the file manager on page 169)
D	Opens the documentation of the nxmi API interface (see chapter XApps on page 284)

Pos. no.	Function
E	Opens the NOVEXX Solutions web page
F	Opens an e-mail to the NOVEXX Solutions service hotline

Machine settings

After clicking on “Machine settings”, the parameter menu familiar from the machine operating panel opens.

More or less parameters are displayed depending on the permissions given by the login role. As “Operator” only the parameters of the Info menu can be accessed.

In order to make machine settings, two conditions must be met:

- Login at least as Supervisor (key sequence 2-2-3-1-2-2)
 - The machine must be *stopped*, otherwise the window will appear “greyed out”
- To *stop*, click the button at the bottom centre of the window:

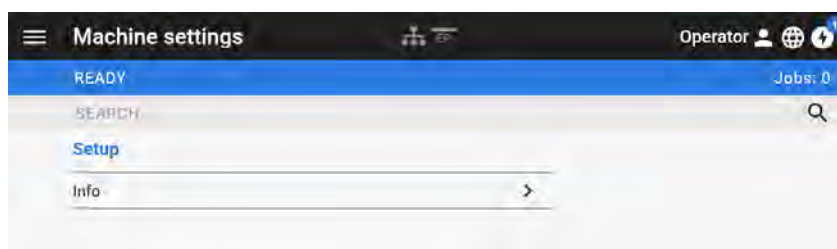
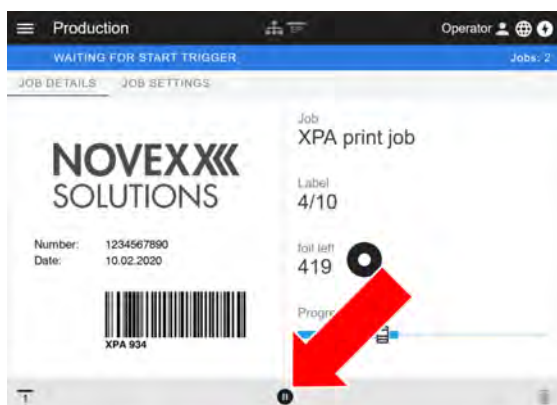


Fig. 18: Machine settings view with the operator role.

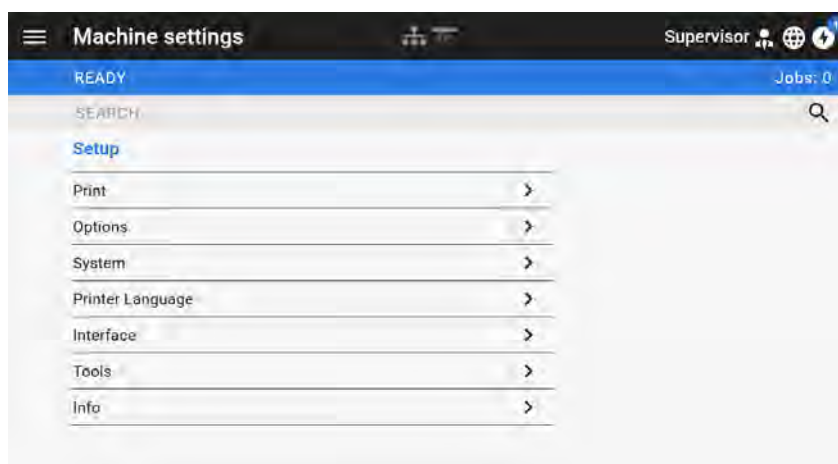


Fig. 19: Machine settings view with the supervisor role.

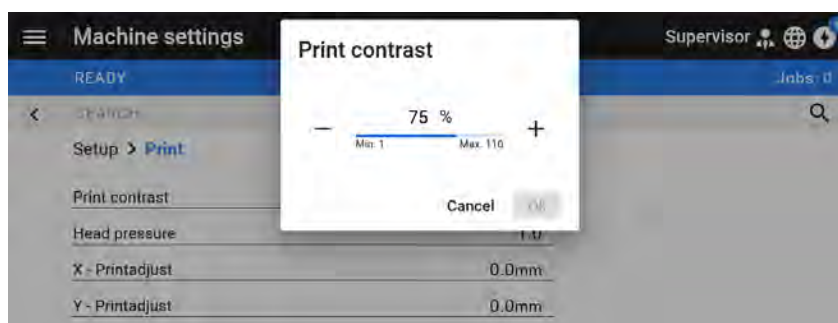


Fig. 20: Example: setting of Print > Print contrast.

! Search function:

If you do not know in which menu the parameter you are looking for can be found, but know at least part of the name, the search function will help you find it quickly:

- Enter the search term in the search field (A) - only parameters containing the search term will appear (B).

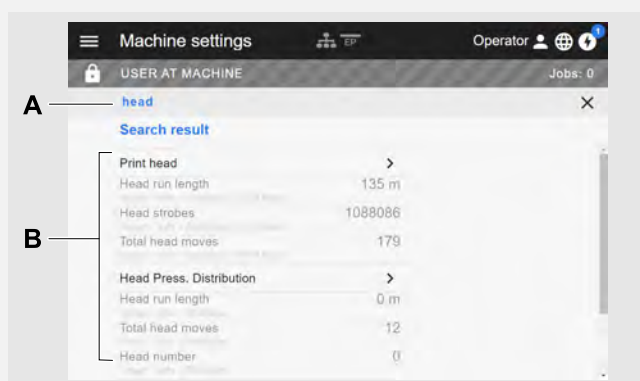


Fig. 21: After entering the search term "head" (A), only parameters containing "head" in the name are displayed (B).

“Administration” view



With the login roles “Supervisor” and “Service”, the “Verwaltung” view appears in the menu additionally. This view provides special functions for qualified and authorized personnel. For more information, refer to the service manual.

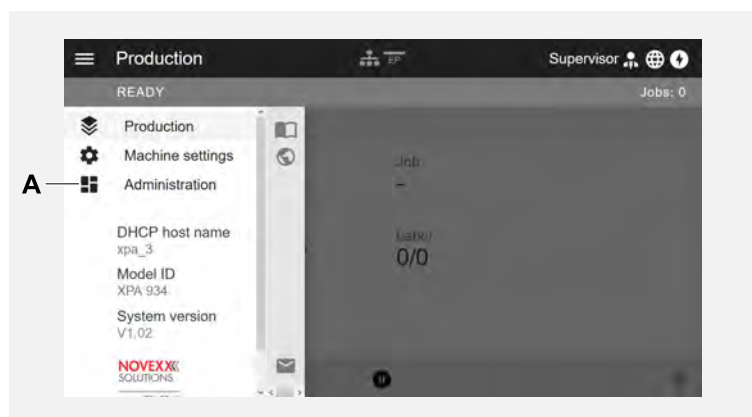


Fig. 22: After logging in as supervisor or service, the “Verwaltung” entry (A) appears in the menu.

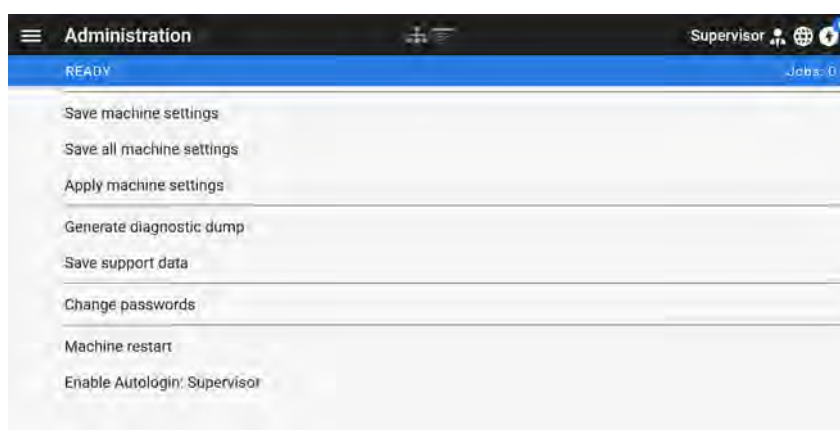


Fig. 23: Administration view (only with “Supervisor” or “Service” rights).

Related tasks

[Save all machine settings](#) on page 177

[Apply machine settings](#) on page 179

PARAMETER MENU

(XDM 94x) Overview parameter menu

The table below gives an overview of the structure of the parameter menu and the parameters it contains.

► Click on the respective link (red text) in the table to get to the parameter description.

Favorites ^[9]	Print	Print (continued)
Parameter 1	Delete Job	L Ribbon
Parameter 2	Print contrast	Ribbon width
...	Head pressure	Ribbon Rew Tens.
Parameter n	X - Printadjust	Ribbon Unw Tens.
	Y - Printadjust	Color Side
	Print speed	Ribbon length
	Delete Spooler	Outer ribbon Ø
	Material	L Inner ribbon Ø
	Label	Ribbon autoecon. ^[10]
	Detect label length	Head down lead ^[11]
	Print method	Feed mode ^[11]
	Head down lead ^[12]	L Feed mode
	Head up limit ^[12]	Format
	Material type	Bar code multip.
	Punch offset	UPC plain-copy
	Material length	EAN Readline
	Material width	EAN sep. lines
	Label sens. type	Rotated barcodes
	Punch mode	L Print direction
	Punch level ^[13]	Feed speed
	L Mat. end detect.	Voltage offset

Table 9: Parameter menu part 1 (parameters in brackets are only visible with "service mode" access rights)

⁹ Parameter selection defined by the operator, see chapter [Definition of Favorites](#) on page 147.

¹⁰ Only with installed ribbon save option

¹¹ Only with Print > Material > Ribbon > Ribbon autoecon. = "On"

¹² Only with Print > Material > Label > Print method = "Thermal/headlift"

¹³ Only with Print > Material > Label > Punch mode = "Manual"

Dispenser	Options	System
Dispense Mode	Selection	Language
Real 1:1	└ Periph. device	Speed unit
└ Dispensing mode	• Submenu <i>8/O</i> see 8IO parameters (USI/Applicator) on page 50. • Submenu <i>BasicIO</i> see BasicIO parameters on page 53. • Submenu <i>Basic-USI</i> see Basic-USI parameters on page 55. • Submenu <i>APSF</i> see APSF parameters on page 55. • Submenu <i>LTMA</i> see LTMA parameters on page 56. • Submenu <i>RFID</i> see RFID parameters on page 57.	Access authoriz.
└ Max InitFeedback		(Operator password)
Speed		(Supervisor password)
└ Print speed		(Service password)
└ Feed speed		Factory settings
Start Signal		Custom defaults
└ Start offset		Setup Wizards
└ Start print mode		(Run Setup Wizard?)
└ Application mode	Label Sensor	Turn-on mode
└ Start source	└ Sensor type	Hardware Setup
└ Start error stop	└ Clear label sensor	└ (Printer type)
└ Product length	└ Sensor teaching	└ Time zone
└ Multi label mode	└ APSF label sensor ^[14]	└ Realtime Clock
└ Label 2 offset ^[15]	└ Head-sensor dist	└ Head-sensor dist
└ Label 3 offset ^[16]	└ Label start detection	Print Control
Dispenseposition	└ Sensor teaching	└ Miss. label tol.
Dispensing edge	Keyboard	└ Fast startup
Head disp dist. ^[17]		└ Gap detect. mode
Display mode		└ Max InitFeedback
Dispense counter		└ Ribb. stretching
Disp. Cnt. Reset		└ Singlestartquant
Rewinder Tension		└ Reprint function
		└ Ribbon end warn.
		└ Ribbon warn stop
		└ Error reprint
		└ Single-job mode
		└ Temp. reduction
		└ Print info mode

Table 10: Parameter menu part 2 (parameters in brackets are only visible with “service mode” access rights)

¹⁴ Only with installed APSF board.¹⁵ Only with Dispenser > Start Signal > Multi label mode = “labels/start”¹⁶ Only with Dispenser > Start Signal > Multi label mode = “labels/start” with x=3¹⁷ Only with Dispenser > Dispensing edge = “User defined”

Printer Language		Printer Language (continued)		Interface	
Print Interpret.		L	Commands	Printinterface	
EasyPlug Setting			└ Format Prefix	Network	
└	Character filter		└ Control Prefix	└	IP Addressassign
└	Character sets		└ Delimiter Char	└	IP address
└	EasyPlug errors		└ Command ^PR	└	Net mask
└	EasyPlug warning		└ Command ^MT	└	Gatewayaddress
└	Spooler mode		└ Command ^JM	└	Port address
└	StandAlone Input		L Command ^MD/~SD	└	DHCP host name
└	#VW/I Interface	PDF Setting ^[18]		L	Services
└	Printer ID no.	└	PDF print quantity	└	WEB server
└	(Command sequence)	└	Scale to Label	└	FTP server
└	(Ignore #IM cmd.)	└	Manual scaling ^[19]	└	Wi-Fi
└	(Ignore print setting cmds.)	└	Blck./white threshold PDF obj.	└	(MQTT broker)
L	(Ignore immediate cmds.)	└	Blck./white threshold graphic	└	(MQTT broker IP) ^[20]
ZPL Setting ^[21]		└	Rotate 90°	└	Time client
└	Manual Calibrate	└	Print direction	└	Time server IP ^[22]
└	Darkness	└	EasyPlug imm. support	└	Time zone ^[22]
└	Label Top	└	EasyPlug imm. interface ^[23]	L	Sync. interval ^[22]
└	Left Position	L	EasyPlug imm. port ^{[23] [24]}	Serial Port 1	
└	Error Indication			└	Baud rate
└	Error Checking			└	No. of data bits
└	Resolution			└	Parity
└	305 DPI Scaling			└	Stop bits
└	Image Save Path			└	Data synch.
└	Label Invert			L	Frame error

Table 11: Parameter menu part 3 (parameters in brackets are only visible with "service mode" access rights)

¹⁸ Only with Printer Language > Print Interpret. = "PDF Direct"

¹⁹ Only with Printer Language > PDF Setting > Scale to Label = "No"

²⁰ Only visible with Interface > Network > Services > MQTT broker = "External server"

²¹ Only with Printer Language > Print Interpret. = "ZPL Emulation"

²² Only visible with Interface > Network > Services > Time client = "Automatic" or "Time server IP"

²³ Only with Printer Language > PDF Setting > EasyPlug imm. support = "Yes"

²⁴ Only with Printer Language > PDF Setting > EasyPlug imm. interface = "TCP/IP SOCKET"

Interface (continued)			Tools		Tools (continued)	
Drives			Diagnostic		Internal Flash	
└	Drive C		└	(User modified) ^[25]	└	Copy From USB ^[26]
└	Drive D			└ Parameter 1	└	Delete Dir
└	Drive E			└ ...		
Home mode				└ Parameter n		
			└	Store Parameters		
			└	Gen.Support Data		
			└	EasyPI. file log ^[27]		
			└	Log files delete ^[27]		
			└	EasyPlug Monitor		
			└	EP Monitor Mode		
			Test			
			└	Sensor test		
			└	Print test		
			(Service)			
			└	(Service done)		
			└	(Head exchange)		
			└	(Roller exchange)		
			└	(Serv. data reset)		
			(Adjustment)			
			└	(Sensor Adjust)		
			└	(Matend tolerance)		
			└	(Feedadjust label)		
			└	(Feed adjust)		
			└	(Forw feed rat.)		
			└	(Backw feed rat.)		
			└	(Punch y calibr.)		
			└	(Head idle adjust)		

Table 12: Parameter menu part 4 (parameters in brackets are only visible with "service mode" access rights)

²⁵ Parameters, whose settings differs from the factory setting.²⁶ If any external flash memory is connected.²⁷ Only with Interface > Drives > Drive C ≠ "None"

Info			Info (continued)		Info (continued)	
Model ID			┆	Operation time		┆ USB2 ^[28]
Status Printouts			L	Total Operation		┆ Spooler size
┆	Printer Status		System			┆ Space for Jobs
┆	Memory Status		L	Machine Data		┆ Max. Labellength
┆	Font Status			┆ Serial number		L Custom defaults
┆	Service Status			┆ Product code	L	CPU board
┆	Dottest endless			┆ Company name		┆ CPU identifier
┆	Dottest punched			L Production date		┆ FPGA version
L	Reference label		L	Module FW. Vers.		┆ EMMC Name
Statistics				┆ System version		┆ U-Boot Version
L	Print head			┆ System revision		┆ Module name
	┆	Head run length		┆ System date		┆ MAC Address
	┆	Head strobes		┆ Operator panel		┆ Module part numb.
	┆	Total head moves		┆ Ribbon unwinder		┆ PCB part number
	┆	Operation time		┆ Ribbon rewinder		┆ Serial number
	┆	Contrast distribution		┆ Material rewind		┆ Production date
	┆	Head pressure distribution		┆ TPH power		┆ Electronics
	┆	Thermal distribution		┆ BasicIO ^[29]		L Module type
	L	Print speed distribution		┆ BasicUSI ^[30]	L	Operator panel
┆	Head run length			┆ 8IO 1 ^[31]		L Serial number
┆	Roll run length			┆ 8IO 2 ^[32]	L	Ribbon unwinder
┆	Total head moves			L Material pull		┆ Module name
┆	Service operations		L	Memory Data		┆ Module part numb.
┆	Head number			┆ RAM memory size		┆ Serial number
┆	Roll number			┆ Space for RAM disc		┆ Production date
┆	Tot. mat. length			┆ Storage media		┆ CAN MAC address
┆	Tot. ribb. length			┆ Internal Flash		L Module type
┆	Head strobes			┆ USB1 ^[33]		

Table 13: Parameter menu part 5 (parameters in brackets are only visible with "service mode" access rights)

²⁸ Only with a 2nd installed flash memory device.²⁹ Only with installed BasicIO board³⁰ Only with installed Basic-USI board³¹ Only with installed 8IO board.³² Only with installed second 8IO board.³³ Only with an installed flash memory device.

Info (continued)		Info (continued)		Info (continued)	
L	Ribbon rewinder		┆ Electronics		┆ Serial number
	┆ Module name		┆ CAN MAC address		┆ Production date
	┆ Module part numb.		L Module type		┆ Module type
	┆ Serial number	L	8IO 1 ^[34]		L Version
	┆ Production date		┆ Module name	L	APSF ^[35]
	┆ Electronics		┆ Module part numb.		┆ Module name
	┆ CAN MAC address		┆ Serial number		┆ Module part numb.
	L Module type		┆ Production date		┆ Electronics
L	TPH power		┆ Electronics		L Module type
	┆ Module name		┆ CAN MAC address	L	Print head
	┆ Module part numb.		L Module type		┆ Module name
	┆ Serial number	L	8IO 2 ^[36]		┆ Module part numb.
	┆ Production date		┆ Module name		┆ Serial number
	┆ Electronics		┆ Module part numb.		┆ Production date
	┆ CAN MAC address		┆ Serial number		┆ Module type
	L Module type		┆ Production date		┆ Resolution
L	BasicIO ^[37]		┆ Electronics		┆ Width
	┆ Module name		┆ CAN MAC address	L	Resistance
	┆ Module part numb.		L Module type	Measurements	
	┆ PCB part number	L	Material pull	┆	Ribb. rest length
	┆ Serial number		┆ Module name	┆	Ribbon diameter
	┆ Production date		┆ Module part numb.	┆	Ribb. rewinder Ø
	┆ Electronics		┆ Serial number	L	Head temperature
	┆ CAN MAC address		┆ Production date		
	L Module type		┆ Electronics		
L	BasicUSI ^[38]		┆ CAN MAC address		
	┆ Module name	L	Module type		
	┆ Module part numb.	L	Power supply		
	┆ Serial number		┆ Module name		
	┆ Production date		┆ Module part numb.		

Table 14: Parameter menu part 6 (parameters in brackets are only visible with "service mode" access rights)

³⁴ Only with installed 8IO board.³⁵ Only with installed APSF board.³⁶ Only with installed second 8IO board.³⁷ Only with installed BasicIO board³⁸ Only with installed Basic-USI board

(XPM 94x) Overview parameter menu

The table below gives an overview of the structure of the parameter menu and the parameters it contains.

► Click on the respective link (red text) in the table to get to the parameter description.

Favorites ^[39]	Print	Print (continued)
Parameter 1	Delete Job	L Ribbon
Parameter 2	Print contrast	Ribbon width
...	Head pressure	Ribbon Rew Tens.
Parameter n	X - Printadjust	Ribbon Unw Tens.
	Y - Printadjust	Color Side
	Print speed	Ribbon length
	Delete Spooler	Outer ribbon Ø
	Material	L Inner ribbon Ø
	Label	Ribbon autoecon. ^[40]
	Detect label length	Head down lead ^[41]
	Print method	Feed mode ^[41]
	Head down lead ^[42]	L Feed mode
	Head up limit ^[42]	Format
	Material type	Bar code multip.
	Punch offset	UPC plain-copy
	Material length	EAN Readline
	Material width	EAN sep. lines
	Label sens. type	Rotated barcodes
	Punch mode	L Print direction
	Punch level ^[43]	Feed speed
	L Mat. end detect.	Voltage offset

Table 15: Parameter menu part 1 (parameters in brackets are only visible with "service mode" access rights)

³⁹ Parameter selection defined by the operator, see chapter [Definition of Favorites](#) on page 147.

⁴⁰ Only with installed ribbon save option

⁴¹ Only with Print > Material > Ribbon > Ribbon autoecon. = "On"

⁴² Only with Print > Material > Label > Print method = "Thermal/headlift"

⁴³ Only with Print > Material > Label > Punch mode = "Manual"

Options		System	Printer Language
Selection		Language	Druck Interpret.
	Periph. device	Speed unit	EasyPlug Setting
• Submenu <i>8IO</i> see 8IO parameters (USI/Applicator) on page 50. • Submenu <i>BasicIO</i> see BasicIO parameters on page 53. • Submenu <i>Basic-USI</i> see Basic-USI parameters on page 55. • Submenu <i>APSF</i> see APSF parameters on page 55. • Submenu <i>Cutter</i> see Cutter parameters on page 58. • Submenu <i>RFID</i> see RFID parameters on page 57.		Access authoriz.	Character filter
		(Operator password)	Character sets
		(Supervisor password)	EasyPlug errors
		(Service password)	EasyPlug warning
		Factory settings	Spooler mode
		Custom defaults	StandAlone Input
		Setup Wizards	#VW/I Interface
		(Run Setup Wizard?)	Printer ID no.
Label Sensor		Turn-on mode	(Command sequence)
	Sensor type	Hardware Setup	L (Ignore #IM cmd.)
	Clear label sensor	(Printer type)	(Ignore print setting cmds.)
	L Sensor teaching	Time zone	L (Ignore immediate cmds.)
L	APSF label sensor ^[44]	Realtime Clock	ZPL Setting ^[45]
	Head-sensor dist	L Head-sensor dist	Manual Calibrate
	Label start detection	Print Control	Darkness
	L Sensor teaching	Miss. label tol.	Label Top
Keyboard		Fast startup	Left Position
		Gap detect. mode	Error Indication
		Max InitFeedback	Error Checking
		Ribb. stretching	Resolution
		Singlestartquant	305 DPI Scaling
		Reprint function	Image Save Path
		Ribbon end warn.	Label Invert
		Ribbon warn stop	L Commands
		Error reprint	Format Prefix
		Single-job mode	Control Prefix
		Temp. reduction	Delimiter Char
		L Print info mode	Command ^PR

Table 16: Parameter menu part 2 (parameters in brackets are only visible with "service mode" access rights)

⁴⁴ Only with installed APSF board.⁴⁵ Only with Printer Language > Druck Interpret. = "ZPL Emulation"

Printer Language (continued)			Interface		Interface (continued)		
	└	Command ^MT	Printinterface			Drives	
	└	Command ^JM	Network			└	Drive C
	└	Command ^MD/~SD	└	IP Addressassign		└	Drive D
PDF Setting ^[46]			└	IP address		└	Drive E
└	PDF print quantity		└	Net mask		Home mode	
└	Scale to Label		└	Gatewayaddress			
└	Manual scaling ^[47]		└	Port address			
└	Blck./white threshold PDF obj.		└	DHCP host name			
└	Blck./white threshold graphic		└	Services			
└	Rotate 90°			└	WEB server		
└	Print direction			└	FTP server		
└	EasyPlug imm. support			└	Wi-Fi		
└	EasyPlug imm. interface ^[48]			└	(MQTT broker)		
└	EasyPlug imm. port ^{[48] [49]}			└	(MQTT broker IP) ^[50]		
				└	Time client		
				└	Time server IP ^[51]		
				└	Time zone ^[51]		
				└	Sync. interval ^[51]		
			Serial Port 1				
			└	Baud rate			
			└	No. of data bits			
			└	Parity			
			└	Stop bits			
			└	Data synch.			
			└	Frame error			

Table 17: Parameter menu part 3 (parameters in brackets are only visible with "service mode" access rights)

⁴⁶ Only with Printer Language > Print Interpret. = "PDF Direct"

⁴⁷ Only with Printer Language > PDF Setting > Scale to Label = "No"

⁴⁸ Only with Printer Language > PDF Setting > EasyPlug imm. support = "Yes"

⁴⁹ Only with Printer Language > PDF Setting > EasyPlug imm. interface = "TCP/IP SOCKET"

⁵⁰ Only visible with Interface > Network > Services > MQTT broker = "External server"

⁵¹ Only visible with Interface > Network > Services > Time client = "Automatic" or "Time server IP"

Tools		Tools (continued)		Info	
Diagnostic		Internal Flash		Statistics	
└	(User modified) ^[52]	└	Copy From USB ^[53]	└	Print head
	└ Parameter 1	└	Delete Dir		└ Head run length
	└ ...				└ Head strobes
	└ Parameter n				└ Total head moves
└	Store Parameters				└ Operation time
└	Gen.Support Data				└ Contrast distribution
└	EasyPI. file log ^[54]				└ Head pressure distribution
└	Log files delete ^[54]				└ Thermal distribution
└	EasyPlug Monitor			└	Print speed distribution
└	EP Monitor Mode			└	Head run length
Test				└	Roll run length
└	Sensor test			└	Cuts on knife ^[55]
└	Print test			└	Total head moves
(Service)				└	Service operations
└	(Service done)			└	Head number
└	(Head exchange)			└	Roll number
└	(Roller exchange)	Info		└	Cutter number ^[55]
└	(Serv. data reset)	Model ID		└	Tot. mat. length
(Adjustment)		Status Printouts		└	Tot. ribb. length
└	(Sensor Adjust)	└	Printer Status	└	Head strobes
└	(Matend tolerance)	└	Memory Status	└	Operation time
└	(Feedadjust label)	└	Font Status	└	Total Operation
└	(Feed adjust)	└	Service Status		
└	(Forw feed rat.)	└	Dottest endless		
└	(Punch y calibr.)	└	Dottest punched		
└	(Head idle adjust)	└	Reference label		

Table 18: Parameter menu part 4 (parameters in brackets are only visible with "service mode" access rights)

⁵² Parameters, whose settings differs from the factory setting.⁵³ If any external flash memory is connected.⁵⁴ Only with Interface > Drives > Drive C ≠ "None"⁵⁵ Only with Options > Selection > Periph. device = "Cutter"

Info (continued)		Info (continued)		Info (continued)	
System		└	USB1 ^[56]	└	Module type
L	Machine Data	└	Storage media	└	Module part numb.
	└ Serial number	└	Internal Flash	└	Serial number
	└ Product code	└	USB2 ^[57]	└	Production date
	└ Company name	└	Spooler size	└	CAN MAC address
	L Production date	└	Space for Jobs	L	Module name
L	Module FW. Vers.	└	Max. Labellength	L	Ribbon rewinder
	└ System version	L	Custom defaults	└	Module name
	└ System revision	L	CPU board	└	Module part numb.
	└ System date	└	CPU identifier	└	Serial number
	└ Operator panel	└	FPGA version	└	Production date
	└ Ribbon unwinder	└	EMMC Name	└	Electronics
	└ Ribbon rewinder	└	U-Boot Version	└	CAN MAC address
	└ Material rewind	└	Module name	L	Module type
	└ TPH power	└	MAC Address	L	TPH power
	└ BasicIO ^[58]	└	Module part numb.	└	Module name
	└ BasicUSI ^[59]	└	PCB part number	└	Module part numb.
	└ Tot. ribb. length ^[60]	└	Serial number	└	Serial number
	L Cutter ^[61]	└	Production date	└	Production date
	└ 8IO 1 ^[62]	└	Electronics	└	Electronics
	└ 8IO 2 ^[63]	L	Module type	└	CAN MAC address
	L Material pull	L	Operator panel	L	Module type
L	Memory Data	L	Serial number		
	└ RAM memory size	L	Ribbon unwinder		
	└ Space for RAM disc	└	Module name		

Table 19: Parameter menu part 5 (parameters in brackets are only visible with "service mode" access rights)

⁵⁶ Only with an installed flash memory device.⁵⁷ Only with a 2nd installed flash memory device.⁵⁸ Only with installed BasicIO board⁵⁹ Only with installed Basic-USI board⁶⁰ Only with installed ribbon saving option⁶¹ Only with Options > Selection > Periph. device = "Cutter"⁶² Only with installed 8IO board.⁶³ Only with installed second 8IO board.

Info (continued)			Info (continued)			Info (continued)		
L	BasicIO ^[64]			└	Production date	L	Power supply	
	└	Module name		└	Electronics		└	Module name
	└	Module part numb.		└	CAN MAC address		└	Module part numb.
	└	PCB part number		L	Module type		└	Serial number
	└	Serial number	L	APSF ^[65]			└	Production date
	└	Production date		└	Module name		└	Module type
	└	Electronics		└	Module part numb.		L	Version
	└	CAN MAC address		└	Electronics	L	Print head	
	L	Module type		L	Module type		└	Module name
L	BasicUSI ^[66]		L	Cutter ^[67]			└	Module part numb.
	└	Module name		└	Module name		└	Serial number
	└	Module part numb.		└	Module part numb.		└	Production date
	└	Serial number		└	Serial number		└	Module type
	└	Production date		└	Production date		└	Resolution
	└	Electronics		└	Electronics		└	Width
	└	CAN MAC address		└	CAN MAC address		L	Resistance
	L	Module type		L	Module type	Measurements		
L	8IO 1 ^[68]		L	Material pull		└	Ribb. rest length	
	└	Module name		└	Module name	└	Ribbon diameter	
	└	Module part numb.		└	Module part numb.	└	Ribb. rewinder Ø	
	└	Serial number		└	Serial number	L	Head temperature	
	└	Production date		└	Production date			
	└	Electronics		└	Electronics			
	└	CAN MAC address		└	CAN MAC address			
	L	Module type		L	Module type			
L	8IO 2 ^[69]							
	└	Module name						
	└	Module part numb.						
	└	Serial number						

Table 20: Parameter menu part 6 (parameters in brackets are only visible with "service mode" access rights)

⁶⁴ Only with installed BasicIO board⁶⁵ Only with installed APSF board.⁶⁶ Only with installed Basic-USI board⁶⁷ Only with Options > Selection > Periph. device = "Cutter"⁶⁸ Only with installed 8IO board.⁶⁹ Only with installed second 8IO board.

8IO parameters (USI/Applicator)

After installing the 8IO board, the submenu Options > Selection > 8IO 1 appears automatically. Further submenus appear depending on the selection made here.

! If a second 8IO board has been installed, the parameter Options > 8IO 2 > Info appears. After calling up this parameter, the note appears that the interface must be defined via a JSON profile. Therefore, a submenu does not appear automatically as for the first 8IO interface.

Selection: USI or applicator operation

First, it must be decided whether the 8IO interface is to be used as an interface for machine signals or for controlling an applicator.

Options	
L	Selection
L	8IO 1
└	Applicator
└	Applicator type
L	Extension signals
L	USI Emulation

USI emulation

After deciding for USI emulation, the following submenu appears:

Options		
L	8IO 1	
L	USI Emulation	
└	Cycle mode	
└	Cycle end delay	(Only with Options > ... > Cycle mode ≠ "Mode0 inactive")
└	Cycle end pulse width	(Only with Options > ... > Cycle mode = "Mode3 low pulse" or "Mode4 high pulse")
└	Ribbon low signaling	
└	Material low signaling	
└	Machine status level	
└	Error signal level	
└	Warning signal level	
└	Reprint input	
└	Feed input	
L	Pause input	

Applicator operation with LTP - LTPV

After selecting the applicator type “LTP - LTPV”, the following submenu appears:

Options

- └ 8IO 1
 - └ LTP - LTPV
 - └ Apply mode
 - └ Blow on time (w/o function)
 - └ TouchDownTimeout
 - └ Position timeout
 - └ Restart delay
 - └ Apply comp. time
 - └ Label pres. sensor

Applicator operation with LA-BO

After selecting the applicator type “LA-BO”, the following submenu appears:

Options

- └ 8IO 1
 - └ LA-BO
 - └ Apply mode
 - └ Blow on time
 - └ Restart delay
 - └ Apply comp. time
 - └ Label pres. sensor

Applicator operation with LA-CE

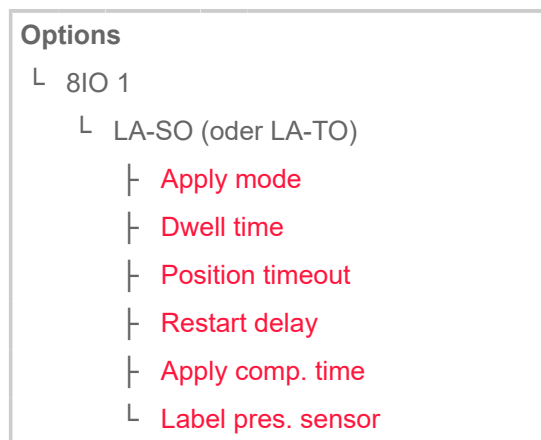
After selecting the applicator type “LA-CE”, the following submenu appears:

Options

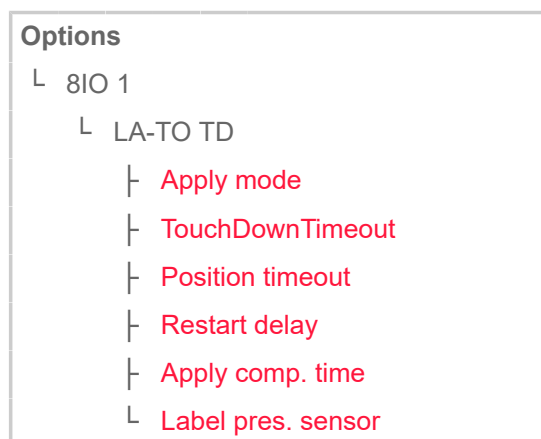
- └ 8IO 1
 - └ LA-CE
 - └ Stop lag time
 - └ TouchDownTimeout
 - └ Position timeout
 - └ Restart delay
 - └ Apply comp. time
 - └ Label pres. sensor

Applicator operation with LA-SO or LA-TO

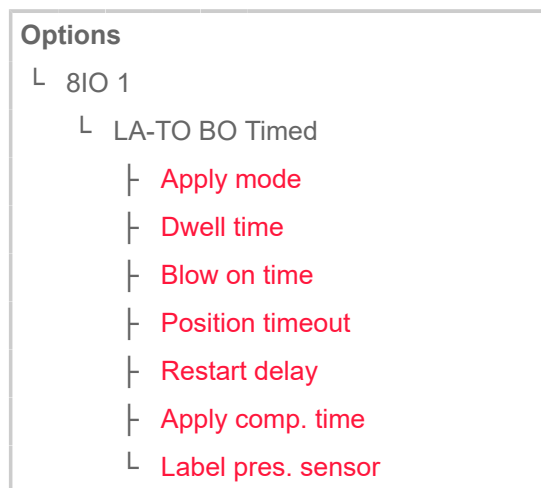
After selecting the applicator type “LA-SO” or “LA-TO”, the following submenu appears:

**Applicator operation with LA-TO TD**

After selecting the applicator type “LA-TO TD”, the following submenu appears:

**Applicator operation with LA-TO BO Timed**

After selecting the applicator type “LA-TO BO Timed”, the following submenu appears:



Applicator operation with LA-TO BO Sensor

After selecting the applicator type “LA-TO BO Sensor”, the following submenu appears:

Options	
└	8IO 1
└	LA-TO BO Sensor
└	Apply mode
└	Blow on time
└	TouchDownTimeout
└	Position timeout
└	Restart delay
└	Apply comp. time
└	Label pres. sensor

BasicIO parameters

After installing the 8IO board, the submenu Options > Selection > BasicIO appears automatically.

First, you have to choose which signals are to be output:

Options	
└	Selection
└	BasicIO
└	Status signals
└	Input signals

Parameters that influence the signals:

Options		
└	BasicIO	
└	Start Sensor	
└	Start print mode	
└	Start error stop	
└	Start Signal	
└	Reprint input	(Only with Options > Selection > BasicIO > Input signals = “reprint/pause input”)
└	Pause input	
└	Material OD Sensor	(Only with Options > Selection > BasicIO > Input signals = “OD1/OD2 input”)
└	Mat. OD Sensor 1	
└	Mat. OD Sensor 2	
└	Materialend error	(Only with Options > BasicIO > Material OD Sensor > Mat. OD Sensor 1 = “Rotation pulse” or ... > Mat. OD Sensor 2 = “Rotation pulse”)
└	Materialend warning	

		L	Ext. OD sensor	(Only with ... > Mat. OD Sensor 1 = "Level high active" or "Level low active" or ... > Mat. OD Sensor 2 = "Level high active" or "Level low active")
--	--	---	----------------	--

Basic-USI parameters

After installing the 8IO board, the submenu Options > Selection > BasicUSI appears automatically.

Parameters that influence the signals:

Options			
L	BasicUSI		
	L	Start Sensor	
		└ Start print mode	
		└ Start error stop	
		└ Start Signal	
		└ Cycle mode	
		└ Cycle end delay	Only with Options > ... > Cycle mode ≠ "Mode0 inactive"
		└ Cycle end pulse width	Only with Options > ... > Cycle mode = "Mode3 low pulse" or "Mode4 high pulse"
		└ Ribbon low signaling	
		└ Material low signaling	
		└ Machine status level	
		└ Error signal level	
		└ Warning signal level	
		└ Reprint input	
		└ Feed input	
		L Pause input	
	L	Capteur Fin Mat.	
		└ Mat. OD Sensor	
		└ Err. fin matière	(Only with Options > BasicUSI > Capteur Fin Mat. > Mat. OD Sensor = "Rotations Impuls")
		└ Alarme fin mat.	
		L Préfin bobine DR	(Only with Options > BasicUSI > Capteur Fin Mat. > Mat. OD Sensor = "Pegel high aktiv" or "Pegel low aktiv")

APSF parameters

After installing the 8IO board, the submenu Options > APSF appears automatically.

Options			
L	APSF		
		└ Speed Adaption	
		└ Encoder Type	
		└ Encoder Resol.	Only with Options > APSF > Speed Adaption = "On"
		└ Encoder Diameter	

	L	Min. APSF Speed
--	---	-----------------

LTMA parameters

► Activating the LTMA : Options > Selection > Periph. device = “LTMA”

Options		
	L	Selection
		L Periph. device

After activating the LTMA, the following parameters appear additionally in the menu:

Options		
	LTMA	
		ApplyMode
		Strokelength
		Appl.Waitpos.
		Applicatorspeed
	L	Restartdelay

RFID parameters

► Activating RFID: Options > Selection > RFID Option = “Serial Com3”

Options	
└	Selection
└	Periph. device
└	RFID Option

After activating the RFID option, the following parameters appear additionally in the menu:

Options	
	RFID
└	Read EPC/UID
└	Write EPC
└	Power level
└	Hotspot test
└	Region
└	Max Tags to stop
└	Nr of Tags
└	Nr. invalid tags
└	Rate READ
└	Rate WRITE
└	Total Nr. READ
└	Total Nr. SELECT
└	Invalid READ
└	Invalid SELECT
└	Invalid WRITE
└	RFID stat.del.
└	RFID Status
└	FW Version
└	Module
└	Module Serial Number

Cutter parameters

► Activating the cutter: Options > Selection > Periph. device = “Cutter”

Options

- └ Selection
 - └ **Periph. device**

After activating the cutter, the following parameters appear additionally in the menu:

Options	Tools	Info
└ Cutter └ Cut mode └ Cut speed └ Cut width └ Cut position └ Double cut └ Rest position	└ (Service) └ (Cutter change)	└ Statistics └ Cutter number └ Total cuts └ System └ Module FW. Vers. └ Cutter └ Cutter └ Module name └ Module part numb. └ Serial number └ Production date └ CAN MAC address └ Module type

Parameter Reference

Print contrast

Setting range	Default setting	Step size	Easy Plug
[1...110] %	65%	1	#IH, #PC2045

CAUTION!

The parameter Print contrast affects directly the life durance of the print head. It counts: „The higher the setting of Print contrast is, the lower is the life durance of the print head“. This counts even more for settings above 100%. Therefore mind:

- Always choose the lowest possible setting necessary to produce an acceptable print result.

Head pressure

Setting range	Default setting	Step size	Easy Plug
[0.1...3.0]	1.0	0.1	#PC2045

Setting of the pressure that presses the print head at the print roller (1=low pressure, 3=high pressure).

! The setting corresponds to the adjustment-knob settings "I" to "III" at older machine types.

X - Printadjust

Setting range	Default setting	Step size	Easy Plug
[-15...15] mm	0.0 mm	0.1 mm	#PC1020

The zero point of the mask is moved in relation to the edge of the label on the X axis, i. e. lengthways to the material.

- Maximum offset away from the edge of the label: +15.0 mm
- No offset: 0.0mm
- Maximum offset towards the edge of the label: -15.0 mm

! If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.

Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter X - Printadjust, the part of the graphics which "juts out" will get lost.

Y - Printadjust

Setting range	Default setting	Step size	Easy Plug
[-15...15] mm	0.0 mm	0.1 mm	#PC1021

The zero point of the mask is moved in relation to the edge of the label on the Y axis, i. e. in the feed direction.

- Maximum offset in feed direction: +15.0 mm
- No offset: 0.0mm
- Maximum offset against feed direction: -15.0 mm

! If the setting is changed, while the print job is stopped, the printer recalculates the format using the changed values.

Caution with graphics, which are generated via one of the Easy Plug commands #YI, #YIR or #YIB! If the graphics is shifted beyond the label border as a consequence of changing the parameter X - Printadjust, the part of the graphics which "juts out" will get lost.

Print speed

Setting range (Inch/s)	Default setting	Step size	Easy Plug
XDM/XPM 944: [4.0..16.0] Inch/s XDM/XPM 945: [4.0..14.0] Inch/s XDM/XPM 946: [4.0..12.0] Inch/s	8.0 Inch/s	0.1 Inch/s	#PC1003, #PR

Setting range (mm/s)	Default setting	Step size	Easy Plug
XDM/XPM 944: [102..406] mm/s XDM/XPM 945: [102..356] mm/s XDM/XPM 946: [102..305] mm/s	203 mm/s	1 mm/s	#PC1051, #PR

! The speed unit can be switched between Inch/s and mm/s (see parameter **Speed unit** on page 131).

The print speed (material feed) can be adjusted according to the ribbon and material combination being used in order to optimise the contrast depth and the density of the print image.

Delete Job

After activating the function, the printer cancels the processing of the active print job.

Delete Spooler

After activating the function, all print jobs in the printer spooler are deleted..

Print method

Settings	Default setting	Step size	Easy Plug
Thermo transfer, Thermal printing, Thermal/headlift	Thermo transfer	--	#PC2018, #ER

- *Thermo transfer*: Thermo transfer printing (ribbon end sensor is switched on)
- *Thermal printing*: Thermo direct printing (ribbon end sensor is switched off)
- *Thermal/headlift*: The print head is raised in areas where there is no printing to prevent unnecessary mechanical wear on the print head.

Related parameters:

- **Head down lead** on page 126
- **Head up limit** on page 136

Punch offset

Setting range	Default setting	Step size	Easy Plug
-8...max. label length [70]	0 mm	0.1 mm	#PC1008, #PO

The zero position can be determined offset in millimetre steps from the detected gap position].

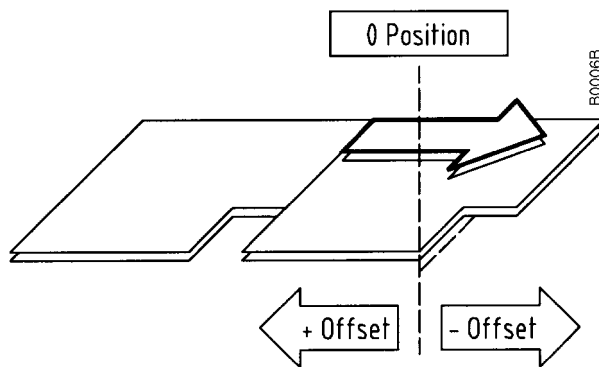


Fig. 24: Positive and negative offset in relation to the feed direction (arrow).

- Maximum offset in feed direction: - 8 mm
- Minimum offset against feed direction: + max. label length

! The value is overwritten by the appropriate Easy Plug command when sending label formats.

Detect label length

! Only works if label material is inserted.

Measures the label length and writes the value to parameter Material length. During the measurement, the label material is fed approx. 2 label lengths.

Material type

Settings	Default setting	Step size	Easy Plug
Endless, Punched	Punched	--	#PC1005, #IM

Definition of the used label material. A distinction is made between endless material and gapped material (hole gaps, self-adhesive material with register gaps). The detected gap position corresponds to the start of the label.

- *Endless*: If material is to be used without gaps

⁷⁰ The max. label length depends on several factors, e. g. the memory configuration.

- *Punched*: If material is to be used with gaps

! The value is overwritten by the appropriate Easy Plug command when sending label formats.

Material length

Settings	Default setting	Step size	Easy Plug
[5...max. label length ^[71]]	100 mm	0.1 mm	#PC1006, #IM

The material length (label length) is the distance between the gaps, measured from the front edge (beginning) of a label to the front edge of the next label.

! The value is overwritten by the appropriate Easy Plug command when sending label formats.

Material width

Settings	Default setting	Step size	Easy Plug
6,0...max. width ^[72]	100 mm	0.1 mm	#PC1007, #IM

Zero position of the left border. If the printer is working in line-printer mode, alterations can be made in millimetre units.

Punch mode

Settings	Default setting	Step size	Easy Plug
Automatic, Manual	Automatic	--	#PC1022

- *Automatic*: Automatic mode, for material with a contrast zone = gap in the label. Suitable for all materials with which there is a difference in the transparency between the label and gap of more than 2 values (see Description, sensor check).

The range of the value automatically measured by the gap detection can be defined specifically for the label material. This allows materials with high-contrast proof points within the label to be processed, which would otherwise be measured as 'false' gaps by the system. The corresponding setting value is then equal to, or smaller than, the value measured at the actual gap.

- *Manual*: Manual setting, for material with several varying contrast zones. Settings are made using the parameter Print > Material > Punch level.

Punch level

Settings	Default setting	Step size	Easy Plug
0...255	--	1	#PC1023

! Only if Print > Material > Punch mode = "Manual"

⁷¹ The max. label length depends on several factors, e. g. the memory configuration.

⁷² The max. width depends on several factors, e. g. the memory configuration.

The value xxx stands for the current contrast within the photoelectric switch of the material which has just been inserted. This serves to determine a threshold value for the inserted material.

```
Punch level
Measured: xxx
AdjLevel: yyy
```

xxx = current measurement at the punch sensor

yyy = set threshold value

Example: Self-adhesive material with black bars lengthways across the label.

Reading:

- Masking paper: 30
- Masking paper + label: 60
- Masking paper + label + black bars: 190
- Recommended setting: 60

A setting value of 60 means that all readings over 60 are ignored, therefore also the reading 190 at the black bar.

Label sens. type

(Label sensor type)

Settings	Default setting	Step size	Easy Plug
Punched, Reflex, Clear label sensor, APSF label sensor	Punched	--	#PC2015, #IM

- *Punched*: Light transmission sensor for labels with transparent or register gaps (self-adhesive labels)
- *Reflex*: Reflex sensor for detection of black marks on the bottom side of the label material

 The setting "Reflex" appears only when

- the optional combined sensor is installed
- the combined sensor is activated (Options > Sensor type = "Combined sensor")

- *Clear label sensor*: Sensor for detecting transparent labels (option for XPA 93x and XDM/XPM 94x)
- *APSF label sensor*: Sensor connected externally to the APSF board for detecting transparent labels

Mat. end detect.

(Material end detection)

Settings	Default setting	Step size	Easy Plug
Off, Transparent	Transparent	--	--

The material end detection can be deactivated for processing labels with gaps longer than 15 mm, or if using material with a high fluctuation in light transparency (Status message „5002 material end“ is displayed even though material is present)..

CAUTION!

Soiling or damaging the print roller.

► Endless (= not converted) material should not be processed when the material end detection is deactivated (otherwise, printing is continued on the print roller after material end).

- *Off*: No material end detection
- *Transparent*: Material end detection by means of a transmission sensor

Ribbon width

Settings	Default setting	Step size	Easy Plug
XDM/XPM 944[25...110] mm	110 mm	1 mm	#PC1033
XDM/XPM 945[30...132] mm	132 mm		
XDM/XPM 946[30...164] mm	164 mm		

Width of the applied thermotransfer ribbon.

Ribbon Unw Tens.

Settings	Default setting	Step size	Easy Plug
[20...200] %	100%	1%	#PC1034

Increases the brake force of the ribbon unwinder.

! The effect is approximately equal to the adjustment of the friction clutch at older machine types.

Ribbon Rew Tens.

Settings	Default setting	Step size	Easy Plug
[20...200] %	100%	1%	#PC1042

Increases the pulling force of the ribbon rewinder.

! The effect is approximately equal to the adjustment of the friction clutch at older machine types.

Color Side

Settings	Default setting	Step size	Easy Plug
inside, outside	inside	--	#PC1049

- *inside*: The ribbon roll is wound with the color side *inwards*.
- *outside*: The ribbon roll is wound with the color side *outwards*.

Ribbon length

Setting range	Default setting	Step size	Easy Plug
[300.0...1300.0] m	1000.0 m	0.1 m	#PC1038

Ribbon length of the applied ribbon roll. The ribbon length is marked on the packaging of the new ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

Outer ribbon Ø

(Outer ribbon roll diameter)

Setting range	Default setting	Step size	Easy Plug
[50.0...150.0] mm	100.0 mm	0.1 mm	#PC1039

Outer Ø of the applied ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

Inner ribbon Ø

(Inner ribbon roll diameter)

Setting range	Default setting	Step size	Easy Plug
[28.0...40.0] mm	33.0 mm	0.1 mm	#PC1040

Inner Ø of the applied ribbon roll. This setting is important for proper functioning of the ribbon-end warning.

! Inner Ø of the ribbon roll = Outer Ø of the ribbon core!

Bar code multip.

(Bar code height scaling factor)

Setting range	Default setting	Step size	Easy Plug
[1...10]	1	1	#PC1009, #YB

Increases the bar code height defined in the label layout (Easy Plug) by multiplication by a factor of 1 to 10.

UPC plain-copy

Setting range	Default setting	Step size	Easy Plug
In line, Raised	In line	--	#PC1010, #YB

The position of the first and last digit in the plain-copy line - underneath the bar code - can be adjusted as required.

- *Raised*: First and last digit of the UPCA or first digit with the UPCE are raised.
- *In line*: All digits in the decoded line are in line under the code.

EAN Readline

Setting range	Default setting	Step size	Easy Plug
Standard, <> Signs	Standard	--	#PC1011, #YB

- *Standard*: Readline without "<>" or ">" signs.
- *<> Signs*: Readline enclosed in "<>" signs or terminated by a ">"-Sign (EAN 13).

EAN sep. lines

Setting range	Default setting	Step size	Easy Plug
With readl. only, Always long	With readl. only	--	

EAN separation lines. Parameter for controlling of EAN or UPC barcodes if they are printed without readline.

- *With readl. only*: The separation bars at the beginning, middle, and the end of the barcode are only long, if the barcode is printed with a readline.
- *Always long*: The separation bars at the beginning, middle, and the end of the barcode are always long, regardless if the barcode is printed with or without readline. The position of the barcode is the same as with the readline option switched on.

Rotated barcodes

Setting range	Default setting	Step size	Easy Plug
Normal, Optimized	Optimized	--	#PC1013, #YB

Improves readability of rotated (90° and 270°) bar codes.

- *Normal*: „Normal“ printing without special processing of rotated bar codes.
- *Optimized*: The line and gap widths of rotated bar codes are modified to improve readability.

Print direction

Setting range	Default setting	Step size	Easy Plug
Foot first, Head first	Foot first	--	#PC1027

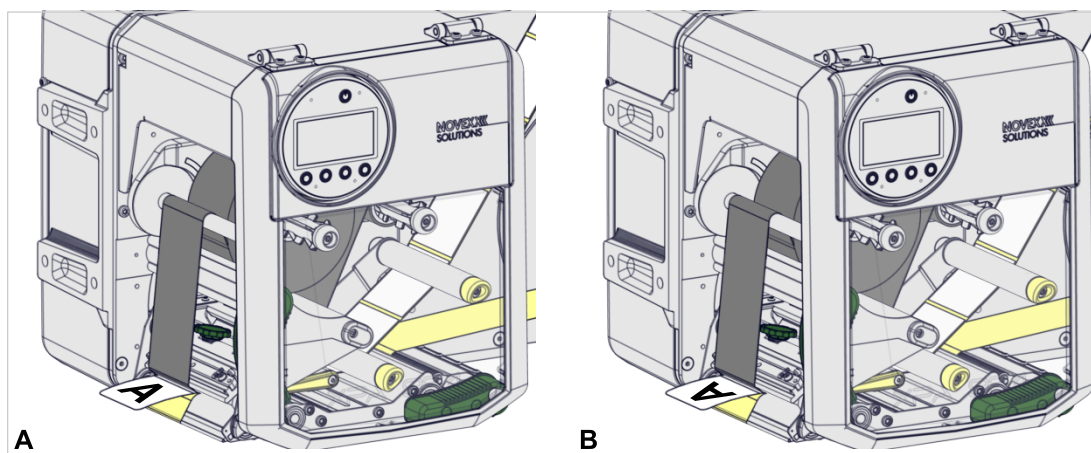


Fig. 25: Orientation of the printout „Foot first“ (A) or „Head first“ (B).

- *Foot first*: Orientation of the printout according to (A).
- *Head first*: Orientation of the printout according to (B). Mind the following:

! Set the “true” label length (without gap length) in parameter Print > Material > Material length. If the label gap is wider than 5 mm, additionally the parameter System > Print Control > Miss. label tol. must be set to a value more than zero.

The distance between material base line and the first printable dot is 1 mm. To keep this distance while printing „head first“, the material width must be calculated as follows:

$$b_{\text{Mat}} = b_{\text{Tr}} - 2 \text{ mm, with}$$

b_{Mat} : Material width

b_{Tr} : Backing paper width

Feed speed

Setting range (Inch/s)	Default setting	Step size	Easy Plug
XDM/XPM 944: [4.0..16.0] Inch/s XDM/XPM 945: [4.0..14.0] Inch/s XDM/XPM 946: [4.0..12.0] Inch/s	8.0 Inch/s	0.1 Inch/s	#PC1004, #PR

Setting range (mm/s)	Default setting	Step size	Easy Plug
XDM/XPM 944: [102..406] mm/s XDM/XPM 945: [102..356] mm/s XDM/XPM 946: [102..305] mm/s	203 mm/s	1 mm/s	#PC1052, #PR

! The speed unit can be switched between Inch/s and mm/s (see parameter **Speed unit** on page 131).

Setting: The value for the feed speed should not be set too high for print applications with long calculating units (e. g. consecutive numbering). This can help to avoid alternating between abrupt braking to 0 (zero) and acceleration to print speed.

! When altering the print speed, the feed speed equals the print speed. If a different feed speed is required, this must be set again.

Backfeed speed

! Only appears in service mode

Setting range (Inch/s)	Default setting	Step size	Easy Plug
XDM/XPM 944: [Off; 4.0..16.0] Inch/s XDM/XPM 945: [Off; 4.0..14.0] Inch/s XDM/XPM 946: [Off; 4.0..12.0] Inch/s	8.0 Inch/s	0.1 Inch/s	#PC1050

Setting range (mm/s)	Default setting	Step size	Easy Plug
XDM/XPM 944: [Off; 102..406] mm/s XDM/XPM 945: [Off; 102..356] mm/s XDM/XPM 946: [Off; 102..305] mm/s	203 mm/s	1 mm/s	#PC1053

! The speed unit can be switched between Inch/s and mm/s (see parameter **Speed unit** on page 131).

Controls the backwards feed speed (backfeed speed) independently of the feed speed of the label material. This may be required in special applications to achieve higher imprint accuracy.

Off: The backfeed speed equals the feed speed. This setting is sufficient for most applications.

Voltage offset

Setting range	Default setting	Step size	Easy Plug
[-20...30] %	0%	1 %	#PC2027

The voltage offset increases the head voltage and therefore the head temperature which e.g. was set by Easy Plug command (HV).

Head lift autom.

Setting range	Default setting	Step size	Easy Plug
Off, On	On	--	#PC3306

Switches the "Head lift automatic" on or off. In high-speed and/or small-label applications, it has been found that the impression accuracy varies depending on whether printing stops between the labels or not. The "Head lift automatic" function ensures that the print head is briefly lifted between all labels, thus ensuring a more uniform impression accuracy.

! The function reduces the label throughput, since the time required for the head lift per label is about 80 ms.

Dispense Mode

Settings	Default setting	Step size	Easy Plug
Normal 1:1 mode, Batch mode, Real 1:1 mode, Dispense only	Real 1:1 mode	--	#PC1014

Governs the run of the print-dispense procedure.

Normal 1:1 mode

- The printer cannot print on the whole label surface. A stripe at the label beginning stays unprinted. The width of the unprintable strip is calculated as follows:
Distance print line to dispensing edge (25.0 mm) + Dispense position

! The position of the print image on the label depends on the length of the unprintable strip. If the dispensing position is changed, or printed on a different device or with a different dispensing edge, the position of the print image shifts in or against the print direction.

See also: Parameter Dispenser > **Dispenseposition** on page 74.

- The label is being dispensed while printing.
- The output volume is at its maximum level.

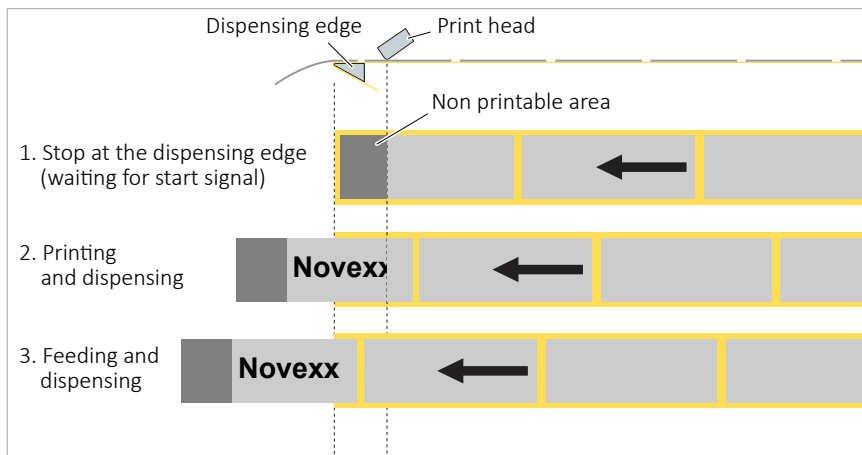


Fig. 26: Printing sequence in "Normal 1:1 mode" (schematic).

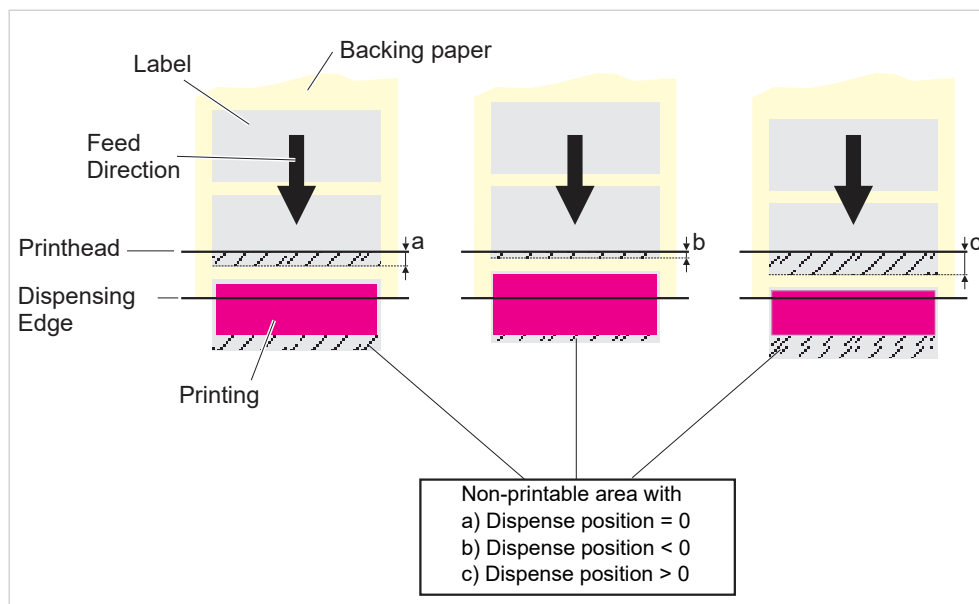


Fig. 27: The size of the not imprintable area in Normal 1:1 depends of the setting of parameter Dispenser > Dispenseposition.

Batch mode

- The printer can print the whole label surface.
- The output volume is at its maximum level.

- One label is dispensed at the same time as the next label is printed (see picture below). As soon as the label is completely dispensed, the printing of the following label stops until a start signal arrives.

! By interrupting the printing, a thin, unprinted line is created at the point where the printing stops. Ideally, the label layout is designed so that there is no blackening at this point.

- The first and last label of a print job is processed as in “Real 1:1 mode”. This clearly distinguishes the beginning and end of a print job from previous and subsequent print jobs. Due to this property, print jobs with quantity 1 in Batch mode do not make sense.

The Batch mode is optimised for printing and dispensing at high speeds. Due to this, it is not possible to use all features available in modes *Normal 1:1* or *Real 1:1*. Please consider the following:

- Printing data must be available on time and in sufficient quantity
- Print jobs *must not* contain the following field types:
 - Counter fields
 - Variable fields
- The “Reprint” function does not work

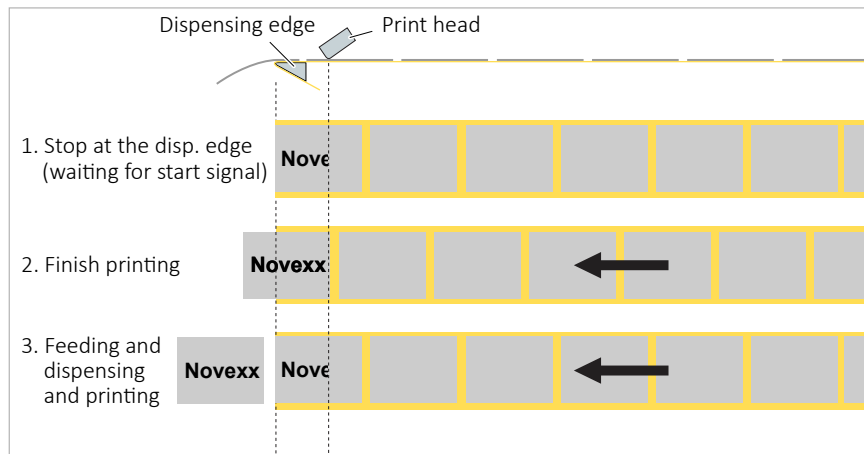


Fig. 28: Printing sequence in "Batch mode" (schematic).

Real 1:1 mode

- The printer can print the whole label surface.
- After dispensing a label, the beginning of the next label is drawn back under the print head.
- The output volume is lower than in *Batch Mode* or *Normal 1:1 Mode*.

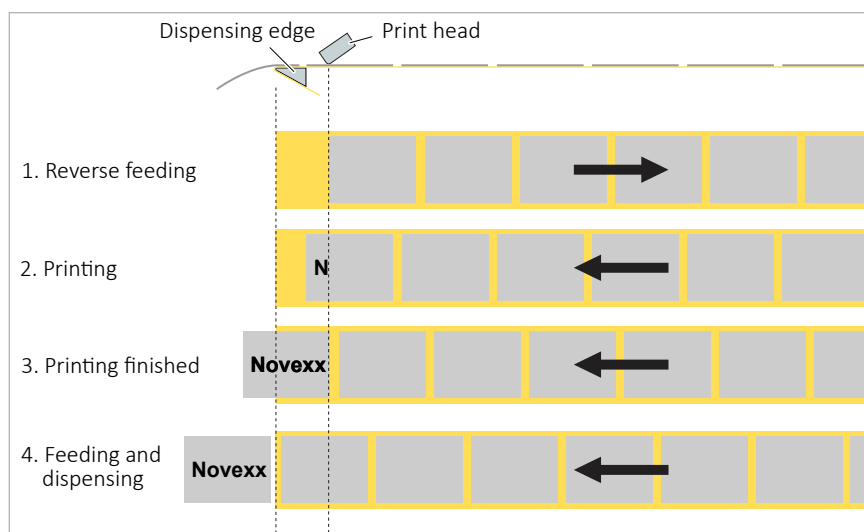


Fig. 29: Printing sequence in "Real 1:1 mode" (schematic).

Dispense only

Enables the printer to be used as a pure dispenser without processing a print job.

See chapter [Use the machine as a dispenser](#) on page 186.

Dispensing mode

! Parameter is only effective in real 1:1 mode (Dispenser > Dispense Mode = "Real 1:1 mode")!

Setting range	Default setting	Step size	Easy Plug
fast, exact	fast	--	#PC2034

Real 1:1 mode normally bears the disadvantage of a slightly lower impression accuracy, caused by the additional slippage at the rollers while feeding back.

The parameter **Dispensing mode** enables optimal positioned printouts even in real 1:1 mode. This accuracy is reached by feeding back the next label to be printed behind the gap sensor instead of "only" as far as under the print head. The additional distance of backwards feeding reduces the output rate slightly.

- *fast*: Printout with a lower impression accuracy but higher output rate
- *exact*: Printout with a maximum impression accuracy

Max InitFeedback

! Only with XDM 94x.

Only if System > Print Control > Gap detect. mode = "Autom. feed back"

Setting range	Default setting	Step size	Easy Plug
[0..200] mm	100 mm	1 mm	#PC2059

During initialization, the label material is transported backwards to the next punch or reflex mark. This parameter defines the maximum permitted retraction distance.

CAUTION!

Risk of malfunction

If the value is selected lower than 100 mm, an endless loop may occur when initialising the rewinder.

- Select value not lower than the default set 100 mm.

Start signal

Settings	Default setting	Step size	Easy Plug
Off, Singlestart, Stacker fail	Singlestart	--	#PC2042

Defines how a signal at the start signal input is interpreted.

- *Off*: Signal interpretation disabled. Print jobs are printed completely.
- *Singlestart*: The signal triggers the printing of a single label.
- *Stacker fail*: The signal triggers the display of a status report ("Stacker") and stops the printer.

Reprint input

! Does *not* work, if Dispenser > Dispense Mode = "Batch mode"

Settings	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC3005

Concerns the input signal `usi.reprint`.

- *Off*: The input signal `usi.reprint` is ignored.
- *On*: The last printed label will be reprinted on the falling edge of the signal.

Feed input

Settings	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC3205

Concerns the input signal `usi.feed`.

- *Off*: Signals at the `usi.feed` input are ignored.
- *On*: Feeding of one label on the falling signal edge.

Pause input

Settings	Default setting	Step size	Easy Plug
Off, On Level Active, On Falling Edge	Off	--	#PC3012

Concerns the input signal `usi.pause`.

- *Off*: Signals at the `usi.pause` input are ignored.

- *On Level Active*: The printer is in pause mode as long as the signal is active.
- *On Falling Edge*: A falling edge of the signal switches the printer into the pause mode. The next falling edge cancels the pause mode.

Cycle mode

! Does *not* work, if Dispenser > Dispense Mode = "Batch mode"

Settings	Default setting	Step size	Easy Plug
Mode0 inactive, Mode1 low level, Mode2 high level, Mode3 low pulse, Mode4 high pulse, Mode5 low level gap, Mode6 high level gap	Mode0 inactive	--	#PC3211

Concerns the output signal `usi.cycle`. Determines the signal response after printing of a label.

- *Mode0 inactive*: No signal.
- *Mode1 low level*: Low, if the print module is just printing a label, otherwise high. The output is also deactivated (= low) as long as labels are fed whether by pressing a button on the control panel or by a `usi.feed` signal.
- *Mode2 high level*: High, if the print module is just printing a label, otherwise low. The output is also deactivated (= high) as long as labels are fed whether by pressing a button on the control panel or by a `usi.feed` signal.
- *Mode3 low pulse*: Low for 20 ms after printing and dispensing a label. The output is also activated (= low) after a label is fed whether by pressing a button on the control panel or by a `usi.feed` signal.
- *Mode4 high pulse*: High for 20 ms after printing and dispensing a label. The output is also activated (= high) after a label is fed whether by pressing a button on the control panel or by a `usi.feed` signal.
- *Mode5 low level gap*: Low in the following cases:
 - If the print module advances a label just during the print dispense process
 - When the label stock is advanced to locate the punch
 - While the label stock is being fed without printing - regardless of whether it was triggered by pressing the feed key on the operation panel or by an incoming `usi.feed` signal
- *Mode6 high level gap*: High in the following cases:
 - If the print module advances a label just during the print dispense process
 - When the label stock is advanced to locate the punch
 - While the label stock is being fed without printing - regardless of whether it was triggered by pressing the feed key on the operation panel or by an incoming `usi.feed` signal

Cycle end delay

! Only visible, if Options > ... > Cycle mode ≠ "Mode0 inactive"

Setting range	Default setting	Step size	Easy Plug
[0...10000] ms	0 ms	10 ms	#PC3213

Setting the time course of the `usi.cycle` signal.

Cycle end pulse width

! Only visible, if Options > ... > Cycle mode = "Mode3 low pulse" or "Mode4 high pulse"

Setting range	Default setting	Step size	Easy Plug
[0...10000] ms	20 ms	10 ms	#PC3214

Setting the time course of the `usi.cycle` signal.

Dispenseposition

Setting range	Default setting	Step size	Easy Plug
[-10,0...10,0] mm	-6.0 mm	0.1 mm	#PC1017

Adjusts the dispense position in ("+") or against ("-") the feed direction. Depending on the set dispense position, the dispensed label sticks to the backing paper with a more or less wide strip (7). The required width of this strip depends on the further processing.

! Dispenseposition 0 mm means the front edge of the label is flush with the dispensing edge.

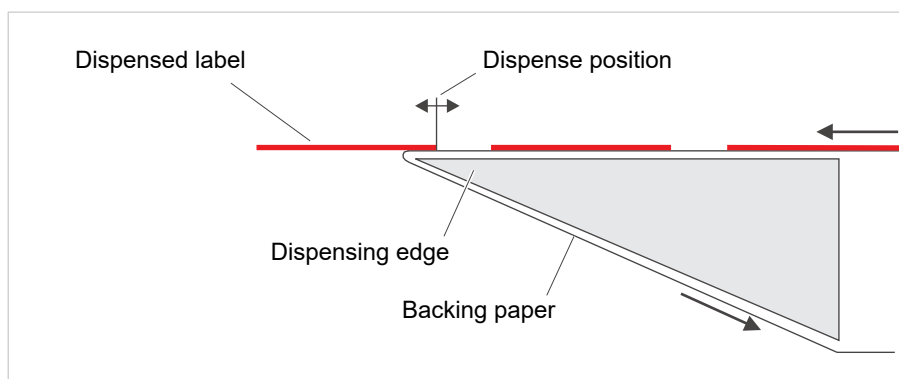


Fig. 30: Dispense position of the dispensed label.

Dispensing edge

Setting range	Default setting	Step size	Easy Plug
Short, long, User defined	Short	--	#PC2040

Adjusts the feed to the length of the dispensing edge.

- *Short*: Short dispensing edge (applicator operation)
- *long*: Long dispensing edge (direct dispensing)
- *User defined*: The distance between the print line and the dispensing edge can be adjusted with the parameter Dispenser > Head disp dist. This is helpful if none of the standard dispensing edges are used.

Display mode

Settings	Default setting	Step size	Easy Plug
Job rest quant., Dispense counter		--	#PC2004

Makes the number of already printed labels appear in the display instead of the number of the not yet printed ones.

- *Job rest quant.*: Display of the *not yet* printed labels of a print job.

! The counter keeps it's value even after switching the printer off.

- *Dispense counter*: Counting of start pulses. The counted number appears on the display after the parameter Dispenser > Dispense counter has been selected.

Dispense counter

Setting range	Default setting	Step size	Easy Plug
--	--	--	#PC2005

```
Dispense counter
xxxxxx
```

xxxxxx = Number of dispensed labels.

There are two ways of setting back the counter:

- Set the parameter Display mode (see above) to "Job rest quant." , then back to "Dispense counter" and confirm by pressing the o. k. key.
- Reduce the displayed number.

Disp. Cnt. Reset

Setting range	Default setting	Step size	Easy Plug
Yes, No	No	--	#!PG100039

- *Yes*: Resets the dispense counter
- *No*: Does *not* reset the dispense counter

Start offset

Setting range	Default setting	Step size	Easy Plug
[15.0...2999.9] mm	15.0 mm	0.1 mm	#PC6004

! Function for operation with product sensor.

Use this parameter to set the distance between product sensor (light barrier) and dispensing edge. The recommended delay time is calculated of the "Start delay" distance and the conveyor speed (= print speed in cases of direct application).

Start error stop

Settings	Default setting	Step size	Easy Plug
On, Off, Off label queued	On	--	#PC3009

! Function for operation with product sensor.

Determines the reaction of the machine on a product start error. A product start error occurs in the following cases:

- If a further start signal arrives, before the current label is completely printed.
- *Only with 8/I O board*: If a reprint is requested, before the first label after powering on is printed.
- If a start signal arrives and no printjob is loaded.

Setting values:

- *On*: If a start error occurs, the machine stops and displays the appropriate status message.

If an *8/I O board* is installed, the following output signals are activated (set low):

- ERROR\
- MACHINE STATUS\

- *Off*: If a start error occurs, the warning “Productstartwarn” is displayed. The machine ignores the relevant start signal.
- *Off label queued*: If a start error occurs, one label more is printed before the printer stops.

Product length

Setting range	Default setting	Step size	Easy Plug
[0.0...1999.9] mm	0.0 mm	0.1 mm	#PC6017

! Function for operation with product sensor.

If this function is activated, the printer ignores all start signals until the product has passed the dispensing edge.

Multi label mode

Setting range	Default setting	Step size	Easy Plug
Off, x labels/start	Off	--	#PC6035

- *Off*: One label is printed/dispensed per start signal
- *x labels/start*: x labels are printed/dispensed per start signal; x = [2...20]
 - For *2 labels* counts: The spacing of the second label corresponds to the value set in Dispenser > Start Signal > Label 2 offset (image, second row)
 - For *3 labels* counts: The spacing of the third label corresponds to the value set in Dispenser > Start Signal > Label 3 offset (image, third row)
 - For *4 to 20 labels* (x > 3) counts: The spacing of all subsequent labels after the 2nd label corresponds to the value set in Dispenser > Start Signal > Label 2 offset (image, fourth row)

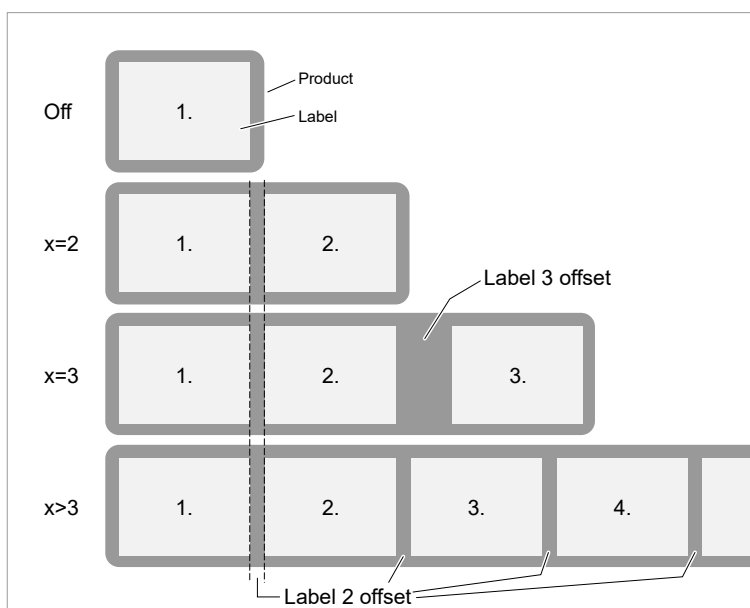


Fig. 31: For 3 labels in a row ($x=3$) there is the special case that the distances between the first and second label and between the second and third label can be set differently. For all other cases, the distance is the same for all subsequent labels.

Label 2 offset

! Only with Dispenser > Start Signal > Multi label mode = "x labels/start"

Setting range	Default setting	Step size	Easy Plug
[x...9999,9] mm, with x = Print > Material > Label > Material length	x mm	0.1 mm	#PC6036

Defines the distance between all labels following the first label if $x=2$ or $x>3$ (see parameter Dispenser > Start Signal > Multi label mode). The distance is measured from the front edge of the previous label.

! ATTENTION - For the Dispense Mode = "Real 1:1 mode" the parameter does not work as described. The distance of the next label cannot be entered in millimetres, but must be determined by "trial and error":

1. Set a rather high value, e. g. 700.
2. Trigger the start signal.
3. Will the desired number of labels be dispensed?
 Yes: Continue with step 4.
 No: Increase the value generously (approx. +50) and repeat step 2.
4. Decrease value step by step until the desired label distance is reached.

Label 3 offset

! Only with Dispenser > Start Signal > Multi label mode = "x labels/start" with $x=3$

Setting range	Default setting	Step size	Easy Plug
[x...9999,9] mm, wobei x = Print > Material > Label > Material length	x mm	0.1 mm	#PC6037

Defines the distance of the 3rd label if $x=3$ (see parameter Dispenser > Start Signal > Multi label mode). The distance is measured from the front edge of the previous label.

! **ATTENTION** - For the Dispense Mode = "Real 1:1 mode" the parameter does not work as described. The distance of the next label cannot be entered in millimetres, but must be determined by "trial and error":

1. Set a rather high value, e. g. 700.
2. Trigger the start signal.
3. Will the desired number of labels be dispensed?
 Yes: Continue with step 4.
 No: Increase the value generously (approx. +50) and repeat step 2.
4. Decrease value step by step until the desired label distance is reached.

Applicator type

Setting range	Default setting	Step size	Easy Plug
LTP - LTPV, Reverse PEP, Direct Dispense, LA-BO, LA-CE, LA-SO, LA-TO, LA-TO TD, LA-TO BO Sensor, LA-TO BO Timed	Direct Dispense	--	#PC3101

- **LTP - LTPV**: Applicator with "Light Touch" function. "Light Touch" means, that the movement of the (compressed air) cylinder is limited by sensors, which react to a light touch onto the product.
- **Reverse PEP**: The applicator moves to its end position and "waits" for the start signal. The start signal triggers the blow on valve which is active for the defined blow on time. After the run out or the blown on time, the applicator moves to home position, gets the next label and moves to the wait position.

! This setting stands for a special signal sequence that is used in customer-specific applications. NOVEXX Solutions does not offer an applicator that uses this signal sequence.

Also refer to .

- **Direct Dispense**: Dispensing directly onto the product, without applicator.
- **LA-BO**: Blow-on applicator. The label is moved by airstream over a short distance onto the product.

Also refer to .

- **LA-CE**: Sensor controlled swivel arm applicator for application around a vertical product edge (CE = Corner Edge).
- **LA-SO**: Time controlled applicator with swivel arm.

Also refer to .

- **LA-TO**: Time controlled tamp-on applicator. The movement of the cylinder is limited by an adjustable time period. After the "application time" has elapsed, the applicator returns to the home position.

Also refer to .

- **LA-TO TD**: Sensor controlled tamp-on applicator. The movement of the cylinder is limited by a (touchdown) sensor, which triggers the backward movement.

Also refer to .

- **LA-TO BO Sensor**: Sensor controlled tamp-on applicator with blow-on function. The movement of the "pressure plate" is reversed by a proximity sensor just above the product. The label travels the rest of the way contactless by blowing.

- **LA-TO BO Timed:** Time controlled tamp-on applicator with blow-on function. The movement of the cylinder is limited by an adjustable time period. The label travels the rest of the way contactless by blowing. After expiration of the Dwell time *and* the Blow on time the applicator returns to the rest position.

Depending on the selected applicator type appears in the menu Options a sub menu with the name of the selected applicator that contains setting parameters for the applicator.

Start print mode

Setting range	Default setting	Step size	Easy Plug
Pulse fall/ris, Level high active, Pulse rising, Level low active, Pulse falling	Pulse falling	--	#PC2043

Selecting a print mode. Depending on the selected mode, the start signal will be interpreted differently.

- **Pulse fall/ris:** The printing of a label is triggered by a low-high-change as well as by a highlow change of the start signal. The printing occurs only after the set delay time.
- **Level high active:** Labels will be printed as long as the start signal is held high.
- **Pulse rising:** The printing of a label is triggered by a low-high change of the start signal. The printing occurs only after the set delay time.
- **Level low active:** Labels will be printed as long as the start signal is held low.
- **Pulse falling:** The printing of a label is triggered by a high-to-low change of the start signal. The printing occurs only after the set delay time.

Keyboard

Setting range	Default setting	Step size	Easy Plug
German, English, French, Spanish, Danish, Finnish, Swedish, Polish	English	--	#PC2063

Setting of a country variant for the keyboard for operation of the printer in standalone mode.

Language

Settings	Default setting	Step size	Easy Plug
German, English, French, Spanish, Dutch, Danish, Italian, Polish, Turkish, Russian, Czech, Chinese ^[73] , Japanese, Hungarian	English	--	#PC2051

Setting the display language.

⁷³ Not all display texts are translated. Not translated texts are displayed in english.

Access authoriz.

(Access authorization)

Settings	Default setting	Step size	Easy Plug
Off, Power-up code, Operator, Supervisor, Operator auto	Off	--	#PC2053

Limits the access either to all printer functions (Power-up code) or only to the parameter menu (Operator or Supervisor mode). Changed settings become active after the next restart or reset.

Setting	Queried when?	Request for	Accepted code
<i>Off</i>	Never	--	--
<i>Power-up code</i>	After restart	Access code	Operator, Supervisor, Service
<i>Operator</i>		Operator Code	Operator, Supervisor, Service
<i>Supervisor</i>	Access to parameter menu	Supervisor Code	Supervisor, Service
<i>Operator auto</i>	Never	--	--

Table 21: Setting options for the access code query.

The access rights depend on the key code entered (see tab. below).

Entering the code:

If the code was valid, the printer switches to the appropriate mode.

Role	Access code	Rights
Operator	1-1-3-2	<i>Parameter menu</i>: Access is limited to the Info menu <i>Web panel</i>: Access to parts of the "Production" and "Machine settings" view <i>Ftp access</i> to machine memory: read-only
Supervisor	2-2-3-1-2-2	<i>Parameter menu</i>: Access to all parameters except service parameters <i>Web panel</i>: Access to the "Production" view, parts of the "Machine settings" view and the "Administration" view <i>Ftp access</i> to machine memory: Read and write access rights
Service	1-2-3-1-2-2-2	<i>Parameter menu</i>: Access to all parameters <i>Web panel</i>: Full access to "Production", "Machine settings" and "Administration" views <i>Ftp access</i> to machine memory: Read and write access rights

Table 22: Permitted roles, their access codes and the associated rights.

CAUTION!

Service mode: Input errors to certain parameters can make the printer inoperable or can damage it.

- The service code may only be applied by trained service technicians.

Operator password

! Only appears in service mode

Settings	Default setting	Step size	Easy Plug
1-4 for each digit	1132	--	#PC2090

A text input field opens, with which a numerical code can be entered. The default code is 4 digits, but longer codes can also be defined.

The numbers can be selected from the quantity [1..4], which stands for the 4 keys of the control panel:



- 1 = Key 1 = Leftmost key
- 2 = Key 2
- 3 = Key 3
- 4 = Key 4 = Rightmost key

Supervisor password

! Only appears in service mode

Settings	Default setting	Step size	Easy Plug
1-4 for each digit	223122	--	#PC2091

A text input field opens, with which a numerical code can be entered. The default code is 6 digits, but longer codes can also be defined.

The numbers can be selected from the quantity [1..4], which stands for the 4 keys of the control panel:

- 1 = Key 1 = Leftmost key
- 2 = Key 2
- 3 = Key 3
- 4 = Key 4 = Rightmost key

Service password

! Only appears in service mode

Settings	Default setting	Step size	Easy Plug
1-4 for each digit	1231222	--	#PC2092

A text input field opens, with which a numerical code can be entered. The default code is 7 digits, but longer codes can also be defined.

The numbers can be selected from the quantity [1..4], which stands for the 4 keys of the control panel:

- 1 = Key 1 = Leftmost key
- 2 = Key 2
- 3 = Key 3
- 4 = Key 4 = Rightmost key

Factory settings

Settings	Default setting	Step size	Easy Plug
No, Custom defaults, Factory defaults	No	--	--

All parameters are preset ex works to values specific to each device type. These factory settings can be restored at any time.

! All parameters are then overwritten by the factory settings.
All data present in the spooler, including data belonging to an interrupted print job, is deleted!

- *No*: No factory setting.
- *Custom defaults*: If custom parameter settings were stored before (see parameter System > Custom defaults), those are restored.
! „Custom defaults“ only appears, if custom settings have already been stored.
- *Factory defaults*: The parameters are set to factory defaults. After switching on, the query appears, if the setup wizard is supposed to be started (Run Setup Wizard?).

Custom defaults

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
Apply current, Delete	Apply current	--	--

- *Apply current*: Stores the current parameter settings as values for the default setup. Those settings are restored by calling parameter System > Factory settings = “Custom defaults”.
- *Delete*: Deletes the stored custom Default settings. „Delete“ is only visible, if settings have already been stored.

Run Setup Wizard?

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
No, Yes	Yes	--	#PC2081

Runs the setup wizard, which queries and sets the most important basic settings.

- *Yes*: A query, if the setup wizard is supposed to be started, appears after switching-on the printer
- *No*: The setup wizard query is switched off

Turn-on mode

Settings	Default setting	Step size	Easy Plug
Home, Ready, Standalone	Ready	--	#PC2020

Operating mode of the printer after it has been switched on.

- *Ready*: Printer starts with display "Ready".
- *Home*: Printer starts with display "Home".
- *Standalone*: Printer starts in standalone mode.

Realtime Clock

! If the time is read automatically from a time server (see), this parameter is for information only, i.e. the setting cannot be changed here.

Settings	Default setting	Step size	Easy Plug
dd.mm.yyyy hh:mm	--	--	--

Setting the realtime clock (date and time). Those data can be processes using the Easy Plug #YC, #YS or #DM commands.

Miss. label tol.

(Missing label tolerance)

Setting range	Default setting	Step size	Easy Plug
[0...50]	2	1	#PC2029

The maximum search path for gaps which cannot be found can be varied. In cases of difficult gap detection (i. e. minimum variation in the light transparency, gap to label), shortening the search path is to be recommended. Label loss resulting from gaps not being detected can be reduced in this way. Printing does not take place during the search process.

- Example 0 (Zero label length):
A gap must be found after a printed label otherwise an error message is given. This setting is for detecting every missing label.
- Example 5 (Five label lengths):
A gap must be found after a maximum of 5 label lengths otherwise an error message is given.

Fast startup

Settings	Default setting	Step size	Easy Plug
No, Yes	No	--	#PC2106

This parameter is intended to make the "Gap detect. mode" parameter easier to understand and easier to handle.

- *No*: The Fast startup function is switched off. The Parameter "Gap detect. mode" (see Gap detect. mode) is visible.

- Yes: The Fast startup function is switched on. The Parameter “Gap detect. mode” (see Gap detect. mode) is not visible. The function corresponds to the former setting Gap detect. mode = “Manual”. The operator must manually start the initialization of the label material for the first time.

Gap detect. mode

Settings	Default setting	Step size	Easy Plug
Autom. forward, Autom. feed back	Autom. forward	--	#PC2067

After switching on and after material changes, the printer must always search the gap/punch again, i.e. initialize the label material:

- *Autom. forward*: The material initialization is always done automatically, if necessary. There is no backward movement of the material during the initialization.
- *Autom. feed back*: The material initialization is always done automatically, if necessary. The label material is moved forward and backward during the initialization. The stretch of backward movement can be set with parameter System > Print Control > Max InitFeedback.

Ribb. stretching

Setting range	Default setting	Step size	Easy Plug
[0..20] mm	5 mm	1 mm	#PC2068

After stopping and restarting the print process, the print quality can fall off for a short stretch in the area printed first after the restart. The reason for this behaviour is the ribbon tension, which relaxes slightly due to the stopping.

The ribbon stretching function feeds the label material backwards for the defined stretch before restarting the print process. Afterwards, feeding starts before the printing. This stretches the ribbon before printing starts.

- *Advantage*: High print quality from the beginning
- *Disadvantage*: Higher ribbon consumption; lower label rate

Singlestartquant

Setting range	Default setting	Step size	Easy Plug
[1...10]	1	1	#PC2033

Determines the label quantity, which will be printed after a start signal.

Reprint function

! Does *not* work, if Dispenser > Dispense Mode = “Batch mode”

Settings	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC2050

- *Off*: Reprinting is not possible.

- **On:** The last printed label can be reprinted by pressing key 4 if, if the following is true at that moment:
 - the display shows „Ready“
 - the printer is not printing

! Reprinting with applicator: The reprint signal simultaneously triggers a start signal. If there is a label on the applicator pressure plate, it is applied, then reprinted and dispensed onto the applicator pressure plate.

Ribbon end warn.

Setting range	Default setting	Step size	Easy Plug
[5...300] m	25 m	5 m	#PC2083

Setting of a limit length for the remaining ribbon. If the remaining ribbon length falls below the set value, appears a...

- Warning, if System > Print Control > Ribbon warn stop = "Off"
- Error message, if System > Print Control > Ribbon warn stop = "On"; Furthermore, the printer stops

Also refer to parameter Ribbon diameter.

Ribbon warn stop

Settings	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC2060

- **Off:** Display shows ribbon warning; printer does *not* stop
- **On:** Display shows status message (see below); printer stops after the current label

```
Status: 5110
Ribbon low
```

Ribbon low signaling

Settings	Default setting	Step size	Easy Plug
Off, On	On	--	#PC3283

Refers to the output signal `usi.warning`, which signals the approaching end of the ribbon or material.

- **Off:** No warning signal.
- **On:** High, when the ribbon supply falls below the threshold value (System > Print Control > Ribbon end warn.).

Error reprint

Settings	Default setting	Step size	Easy Plug
On, Off	On	--	#PC2022

If an error occurs while a label is printed, the last printed label is reprinted. For label layouts containing variable data (for example, count fields), disable the reprint function.

- *On*: Reprint in error cases
- *Off*: No reprint in error cases

Single-job mode

Settings	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC2023

In single job mode (also stop mode) the printer stops after every job and waits until the operator restarts the print process.

- *Off*: Single job mode is switched off.
- *On*: Single job mode is switched on. The printer always displays "Start next job", before starting a new print job. This message has to be acknowledged.

Temp. reduction

(Reduction in the print head temperature)

Setting range	Default setting	Step size	Easy Plug
[0...100]%	20%	5%	#PC2026

Reduces the power supply in the event of an increase in the print head temperature, there-by ensuring an evenly good print image.

The following setting alternatives are available:

- 0%: No temperature reduction.
- xx%: Up to xx% temperature reduction with a hot print head.

For details refer to chapter [Printing with temperature compensation](#) on page 185.

Print info mode

Settings	Default setting	Step size	Easy Plug
Par.values right, Par.values left, Compact right, Compact left	Par.values right	--	#PC2049

Structure option for info printouts.

- *Par.values right*: Setting for 100 mm material width. The parameter values are printed on the right side of the parameter names:
Parameter name: Value
- *Par.values left*: Setting for 100 mm material width. The parameter values are printed on the left side of the parameter names:
Value: Parameter name
- *Compact right*: Setting for 50 mm material width. The parameter values are printed on the right side of the parameter names:

Parameter name: Value

- *Compact left*: Setting for 50 mm material width. The parameter values are printed on the left side of the parameter names:
Value: Parameter name

Print Interpret.

Settings	Default setting	Step size	Easy Plug
Easyplug, Lineprinter, Hexdump, ZPL Emulation, EasyPlug/ZPL Emu, PDF Direct	Easyplug	--	#PC2012

- *Easyplug*: Printjobs written in the Easy Plug command language can be interpreted.
- *Lineprinter*: Lineprinter (or similar to Lineprinter), print-out of the print command
- *Hexdump*: Print-out in hexadecimal format.

In Lineprinter and Hex Dump, commands are printed out in the form of a list with the character set 12.

! When setting Lineprinter or Hex Dump, Easy Plug commands which have not yet been processed are deleted!

- *ZPL Emulation*: Printjobs written in the ZPL II®^[74] command language („ZPL“) can be interpreted. The Printer Language > ZPL Emulation menu appears, which contains parameters for setting ZPL emulation.

! Firmware loading requires changing into “Easyplug” setting first.

- *EasyPlug/ZPL Emu*: Printjobs in EasyPlug and ZPL can be interpreted. Loading of Firmware is possible without switching to the “Easyplug” setting.

! Use this setting only for simple printjobs. Complications are more likely with this setting.

- *PDF Direct*: Enables direct printing of PDF files. The files are converted into a bitmap and can be scaled and rotated. The Printer Language > PDF Setting menu appears, which contains parameters for setting PDF printing.

Print interface

Settings	Default setting	Step size	Easy Plug
Serial Com1, TCP/IP SOCKET, LPD server, USB, Automatic	Automatic	--	#PC1101

This parameter sets the interface, by which the printer will receive data.

- *Serial Com1*: Serial interface Com1.
- *TCP/IP SOCKET*: Print data can be sent to the printer via a TCP/IP socket.
- *LPD server*: Print data can be sent to the printer via the LPR/LPD-protocol
- *USB*: USB interface
- *Automatic*: All interfaces are enabled to receive data, but *not simultaneously*.

⁷⁴ ZPL II is a registered trademark of ZIH Corp.

! Don't send data to more than one interface at a time.

Character filter

Settings	Default setting	Step size	Easy Plug
Chars >= 20Hex, All characters	Chars >= 20Hex	--	#PC2014

- Chars >= 20Hex: Filter function is activated. Characters smaller than 20H are filtered out of the data flow.
- *All characters*: Filter function is deactivated. Characters smaller than 20H are treated as normal characters.

Character sets

Settings	Default setting	Step size	Easy Plug
UTF-8, ISO 8859-2, ANSI (CP 1250), ANSI (CP 1252), IBM, Special, Norway, Spain, Sweden, Italy, Germany, France, United Kingdom, USA	IBM	--	#PC2013

Setting the character set.

- *16Bit*: UTF-8 coding
- *8Bit*: Choose between IBM and ANSI character set.
- *7Bit*: Additionally to the IBM and ANSI character sets, some country specific character sets are provided, which have some characters allocated differently (see table below).

! The country specific character sets are only suitable for older 7bit applications!

Decimal	35	36	64	91	92	93	94	96	123	124	125	126	>127
ASCII	#	\$	@	[	\	]	^	'	{		}	~	
UTF- 8	#	\$	@	[	\	]	^	`	{		}	~	print
ISO 8859-2	#	\$	@	[	\	]	^	`	{		}	~	print
ANSI (CP 1250)	#	\$	@	[	\	]	^	`	{		}	~	print
ANSI (CP 1252) ^[75]	#	\$	@	[	\	]	^	`	{		}	~	print
IBM	#	\$	@	[	\	]	^	`	{		}	~	print
Special	f	¢	blank	blank	¼	½	blank	blank	«	•	»	±	blank
Norway	#	\$	@	Æ	¥	Å	^	`	æ	¢	å	~	blank
Spain	#	\$	@	í	Ñ	Ç	^	`	¿	ñ	ç	~	blank
Sweden	#	•	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü	blank
Italy	Š	\$	§	°	ç	é	^	ù	à	ò	è	`	blank

⁷⁵ Covering ISO 8859-1.

Decimal	35	36	64	91	92	93	94	96	123	124	125	126	>127
ASCII	#	\$	@	[	\	]	^	`	{		}	~	
Germany	#	\$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß	blank
France	£	\$	à	°	ç	§	^	`	é	ù	è	~	blank
United Kingdom	£	\$	@	[	\	]	^	`	{		}	½	blank
USA	#	\$	@	[	\	]	^	`	{		}	~	blank
	blank = space, print = printable												

Table 23: Country settings for applications, which base on 7bit ASCII code.

EasyPlug errors

Setting range	Default setting	Step size	Easy Plug
Tolerant handl., Strict handling, Strict handling w. #YV	Tolerant handl.	--	

Handling of errors caused by faulty Easy Plug commands.

- *Tolerant handl.*: The label is printed, after the Easy Plug/Bitimage error was acknowledged.
- *Strict handling*: The Easy Plug command, which caused the error, is displayed after approx. 2 seconds in the lower display line. The displayed text is up to 30 characters long and is scrolled automatically.
If a single character caused the error, this character is marked with „>> <<“, in the display text, to facilitate the detection.

After acknowledging the first occurred Easy Plug error, the printjob and the spooler are deleted (as by #!CA). This prevents the printing of labels with format errors.

- *Strict handling w. #YV*: Like “Strict handling”, except that additionally errors caused by the Easy Plug command #YV are taken into account.

! CAUTION! - The setting “Strict handling w. #YV” can lead to deletion of the print job if drawing the field causes an error with the new variable value. This means that a print job that has been running for a long time may be deleted. Do not select this setting during normal production of Easy Plug print jobs unless this behavior is explicitly desired.

In case of an error, the displayed info text can give an indication of the cause of the error.

EasyPlug warning

Setting range	Default setting	Step size	Easy Plug
On, Off	On	--	#PC2085

Spooler mode

Settings	Default setting	Step size	Easy Plug
Mult. print jobs, Single print job	Mult. print jobs	--	#PC1102

The operating mode of the spooler determines whether print series are processed individually, or whether the spooler can receive print data when printing several series.

- *Mult. print jobs*: Multiple print series mode (the interface can receive data while the series is being printed)
- *Single print job*: Single print series mode (the interface can only receive data after printing the required number of labels of a single series)

StandAlone Input

Settings	Default setting	Step size	Easy Plug
None, Serial Com1, Serial Com3, TCP/IP SOCKET	None	--	#PC1550

Defines an interface for data input in standalone mode.

! Interfaces are only selectable, if installed and not used by another function (e. g. as data interface). If Printer Language > Print interface = "Auto negotiation", all interfaces besides Com3 are blanked out

- *None*: No data input via interface.
- *Serial Com1*: Com1 is activated for data input in standalone mode.
- *Serial Com3*: Com3 is activated for data input in standalone mode.
- *TCP/IP SOCKET*: Ethernet interface is activated for data input in standalone mode.

#VW/I Interface

Settings	Default setting	Step size	Easy Plug
Easyplug, Serial Com1, USB, TCP/IP SOCKET	Easyplug	--	#PC5310

Defines the output interface belonging to the Easy Plug command #VW/I.

- *Easyplug*: Interface that is defined in Interface > Print interface as input interface for print data
- *Serial Com1*: Serial interface Com 1.

! Only available for selection, if the interface is not occupied by another function.

- *USB*: USB interface

! Only available for selection, if the interface is not occupied by another function.

- *TCP/IP SOCKET*: Ethernet interface

! Only available for selection, if the interface is not occupied by another function.

Printer ID no.

(Printer identification number)

Setting range	Default setting	Step size	Easy Plug
[0...31]	1	1	#PC1103

Determines the identification number of the printer. In such a way, the printer can be addressed by the Easy Plug command #!An (n=printer ID). The use of ID numbers is in particular reasonable for data

transfer by RS422/485 interface, if several printers are connected by one data line. Each of the connected printers then only incorporates the data mapped to him by #!An command.

Command sequence

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
'#', '~'	'#'	--	#PC5004

- '~': "~" is used as start sign for Easy-Plug command sequences
- '#': "#" is used as start sign for Easy-Plug command sequences

Ignore #IM cmd.

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
No, Yes	No	--	#PC5311

Normally, material information (command #IM) contained in the Easy Plug print job is preferred over the settings in the machine's parameter menu.

- No: Function disabled
- Yes: Ignores the material information (command #IM) in the print job

Ignore print setting cmds.

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
No, Yes	No	--	#PC5312

- No: Function disabled
- Yes: Ignores the Easy Plug commands #IM, #PA, #PO, #CF, #CIM, #CW, #HV, #N, #PC, #PR and #RX

Ignore immediate cmds.

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
No, Yes	No	--	#PC5313

- No: Function disabled
- Yes: Ignores the Easy Plug immediate commands #!CA, #! CF, #! H, #! PC, #! PG, #! Xn and #! XMn

IP Addressassign

Settings	Default setting	Step size	Easy Plug
Fixed IP address, DHCP	Fixed IP address	--	#PC1501

- *Fixed IP address*: This setting activates the parameters "Net mask" and "Gateway address" (see below).
- *DHCP*: IP address is assigned automatically. The assigned IP address is displayed for a moment on the printer display, while the printer is starting.

 A change of this parameter setting forces a printer restart.

IP address

Setting range	Default setting	Step size	Easy Plug
[0...255] ^[76]	192.168.0.99	--	#PC1502

Depending on the setting of parameter Interface > Network > IP Addressassign, appears one of the following:

- an unchangeable info field (setting „DHCP“) or
- an input field (setting „Fixed IP address“) for the IP address

Net mask

Setting range	Default setting	Step size	Easy Plug
[0...255] ^[77]	255.255.255.0	--	#PC1503

Depending on the setting of parameter Interface > Network > IP Addressassign, appears one of the following:

- an unchangeable info field (setting „DHCP“) or
- an input field (setting „Fixed IP address“) for the IP address

Depending on the set IP address appears a default value.

 EsWe recommend to use the default value!

Gateway address

Setting range	Default setting	Step size	Easy Plug
[0...255] ^[78]	0.0.0.0	--	#PC1504

000.000.000.000 = no gateway is used

⁷⁶ for each xxx-value in in xxx.xxx.xxx.xxx

⁷⁷ for each xxx-value in xxx.xxx.xxx.xxx

⁷⁸ for each xxx-value in xxx.xxx.xxx.xxx

Port address

Setting range	Default setting	Step size	Easy Plug
[1024...65535]	9100	--	#PC1505

DHCP host name

Setting range	Default setting	Step size	Easy Plug
--	nxx-mmmmmm	--	#PC1513

Host name of the printer. Default setting: "nxx-mmmmmm" (mmmmmm are the last 3 bytes of the MAC address)

WEB server

Settings	Default setting	Step size	Easy Plug
On, Off	Off	--	#PC1509

The web server allows to operate the machine via the web panel.

For details refer to chapter [Web panel - what's that?](#) on page 28.

- *On*: Switches the web server on.
- *Off*: Switches the web server off.

FTP server

Settings	Default setting	Step size	Easy Plug
On, Off	Off	--	#PC1507

The File Transfer Protocol (FTP) server (RFC959) allows access to the internal and external memory of the machine.

For details refer to chapter [Memory access via FTP](#) on page 170.

- *On*: Switches the FTP server on.
- *Off*: Switches the FTP server off.

Wi-Fi

Settings	Default setting	Step size	Easy Plug
Off, Wi-Fi direct	Off	--	#PC1536

- *Off*: No connection to Wifi thumb drive
- *Wi-Fi direct*: Connection to Wifi thumb drive

Time client

! With the time client service, the current date and time can be obtained from a time server using RFC 5905 time protocol on UDP port 123. For this purpose, a time server IP address needs to be given. Date and time are initially requested at start up and optional in a settable update interval during operation time. It is also stored in the internal real time clock. There is no time offset or daylight saving hour, so the server time must exactly match the local time of the printer.

Settings	Default setting	Step size	Easy Plug
Off, Auto negotiation, Time server IP	Off	--	#PC1529

Loads the current time from a time server.

- *Off*: The time client is switched off.
- *Auto negotiation*: If there is a time server on the current network to which the machine is connected, it is used.
- *Time server IP*: The time client is switched on. The time is loaded with the frequency set under Sync. interval from a time server with the IP address Time server IP.

If there is no valid time server response within 2 s after system start, an error message appears:

```
Status num: 9040
No Time Server
```

Time server IP

! Only appears in service mode

Only appears if Interface > Network > Services > Time client = "On".

Setting range	Default setting	Step width	Easy Plug
[0...255] ^[79]	130.133.1.10	--	#PC1530

IP address of the time server.

Sync. interval

! Only appears if Interface > Network > Services > Time client = "On".

Setting range	Default setting	Step width	Easy Plug
[0...9999] s	3600 s	1 s	--

Determines the frequency for time requests.

Time zone

Setting range	Default setting	Step size	Easy Plug
[-12:00...+12:00]	00:00	00:30	#PC1533

⁷⁹ for each xxx-value in xxx.xxx.xxx.xxx

Correction of the time received by the time server by a value expressed in hours (hh) and minutes (mm).

! Only appears, if Interface > Network > Services > Time client = „On“.

Baud rate

Setting range	Default setting	Step size	Easy Plug
2400 Baud, 4800 Baud, 9600 Baud, 19200 Baud, 38400 Baud, 115200 Baud	115200 Baud ^a	--	#PC1201

Speed of data transfer using the serial interface.

No. of data bits

Settings	Default setting	Step size	Easy Plug
[7..8]	8	1	#PC1202

Parity

Setting range	Default setting	Step size	Easy Plug
Odd, Even, None, Always zero	None	--	#PC1203

Defines the parity check of serial transmitted data.

The parity bit is for checking data transmission. If the check shows an error, a corresponding message is displayed. The setting must be identical at the sender and the receiver. Normally transmission is set without a parity bit.

- *Odd*: A parity bit is added so that there is an odd number of 1 Bits.
- *Even*: A parity bit is added so that there is an even number of 1 Bits.
- *None*: Sending and receiving without check bit.
- *Always zero*: Check bit is always 0 (zero). Sending and receiving without parity check.

Stop bits

Settings	Default setting	Step size	Easy Plug
[1..2]	1	--	#PC1204

Data synch.

Setting range	Default setting	Step size	Easy Plug
RTS/CTS, XON/XOFF, None	RTS/CTS	--	#PC1205

Data synchronisation at the serial interface

- *RTS/CTS*: Data synchronisation through hardware
- *XON/XOFF*: Data synchronisation through software
- *None*: Handshake signals are ignored

Frame error

Settings	Default setting	Step size	Easy Plug
Display, Ignore	Display	--	#PC1207

- *Display*: An error message is displayed, if a framing error is detected while the printer is receiving serial data.
- *Ignore*: Framing errors will be ignored, no error messages are displayed.

Drive C

Settings	Default setting	Step size	Easy Plug
None, Internal Flash, USB1, USB2	Internal Flash	--	#PC1600

Assigns the drive letter C with a connection for external data carrier.

- *None*: C is not assigned
- *Internal Flash*: Assigns drive letter C to the internal Flash memory.
- *USB1*: Assigns drive letter C to the *first* USB thumb drive at the host interface.
- *USB2*: Assigns drive letter C to the *second* USB thumb drive at the host interface.

Drive D

Settings	Default setting	Step size	Easy Plug
None, Internal Flash, USB1, USB2, Front USB	Internal Flash	--	#PC1601

Assigns the drive letter D with a connection for external data carrier.

- *None*: D is not assigned
- *Internal Flash*: Assigns drive letter D to the internal Flash memory.
- *USB1*: Assigns drive letter D to the *first* USB thumb drive at the host interface.
- *USB2*: Assigns drive letter D to the *second* USB thumb drive at the host interface.

Drive E

Settings	Default setting	Step size	Easy Plug
None, Internal Flash, USB1, USB2, Front USB	Internal Flash	--	#PC1602

Assigns the drive letter E with a connection for external data carrier.

- *None*: E is not assigned
- *Internal Flash*: Assigns drive letter E to the internal Flash memory.
- *USB1*: Assigns drive letter E to the *first* USB thumb drive at the host interface.
- *USB2*: Assigns drive letter E to the *second* USB thumb drive at the host interface.

Home mode



Fig. 32: Display "Home" (= "Home Mode").

Settings	Default setting	Step size	Easy Plug
Interf. disabled, Interf. enabled	Interf. disabled	--	#PC2072

- *Interf. disabled*: When the machine is in "Home Mode", Easy Plug commands are *not* accepted (no print jobs and no status queries)
- *Interf. enabled*: In "Home Mode", no print jobs are accepted, but status queries with Easy Plug immediate commands (e.g. #!X) are accepted.

Store Parameters

Settings	Default setting	Step size	Easy Plug
Without adj. par, With adjust para	Without adj. par	--	--

Parameter settings are saved in a text file on memory card (directory `FORMATS\`). Considered are also parameters which belong to options, which are not activated.

- *Without adj. par*: Parameters, which contain device specific settings, are *not* saved. (Default file name: `SETUP.FOR`).

Application example: Transfer of printer settings to another printer (device specific settings as print head resistance or sensor settings should not be overwritten).

- *With adjust para*: Parameters, which contain device specific settings, are *also* saved. The relevant parameter names are marked with a * in the text file. (Default file name: `SETUPALL.FOR`).

Application example: Service

Gen.Support Data

(Generate support data)

Generates the folder „SupportData“ on the selected memory medium and stores the following diagnosis files therein:

- `Setup.for` (for details see Tools > Diagnostic > Store Parameters)
- `SetupAll.for` (for details see Tools > Diagnostic > Store Parameters)
- `Diagnose.log`

Each of the file names is completed by the printer type and the serial number of the CPU board. The file content is english, regardless of the language setting at the printer.

Those data are very helpful for the technical support for fault diagnosis purposes.

EasyPI. file log

(Easy Plug file log)

! Only with Interface > Drives > Drive C ≠ "None"

The log file is written to the memory to which the drive letter C is assigned (see **Drive C** on page 96). By default this is the internal flash memory, alternatively a USB thumb drive can be selected if available.

The log function only starts after the printer has been restarted (display „Easy Plug file log“ during start-up).

Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

Activating this parameter may cause error messages, which may be difficult to understand. Therefore disable the function after error analysis. If an error occurs, disable the function and restart the printer.

Settings	Default setting	Step size	Easy Plug
Off, All data, Interpreter data	Off	--	#PC5005

- *Off*: The file log function is switched off
- *All data*: All received data, including immediate commands, are written into the log file
- *Interpreter data*: All data is written into the log file, which the Easy-Plug interpreter reads out of the reception spooler. Immediate commands are *not* included

Log files delete

! Only with Interface > Drives > Drive C ≠ "None"

Settings	Default setting	Step size	Easy Plug
No, Yes	No	--	--

- *No*: Nothing happens
- *Yes*: Deletes all log files on the storage medium mapped in Drive C that meet the following conditions:
 - *File name* corresponds to the scheme `EPxxxxxx.log`, where `xxxxxx` = number from 1 to 999999, preceding digits are filled with 0. Example: `EP000001.log`.

– *Storage location*: \LOGFILES directory on the storage medium

! Those conditions are matched by logfiles, which are automatically generated by Tools > Diagnostic > EasyPI. file log.

EasyPlug Monitor

! Only appears in service mode

Settings	Default setting	Step size	Easy Plug
Off, Serial Com1	Off	--	#PC5113

The parameter activates the logging of received Easy Plug data. Data is transmitted to the serial interface (Com1).

- *Off*: The monitor function is disabled.
- *Serial Com1*: The Easy Plug monitor data is transmitted to the serial interface (Com1).

! Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

! To keep the influence of the monitoring function on the data rate as low as possible, the baud rate should be set to 115,000!

EP Monitor Mode

! Only appears in service mode

! Activating this parameter may slow down the label rate. Therefore disable the function after error analysis.

Settings	Default setting	Step size	Easy Plug
Interpreter data, All data	Interpreter data	--	#PC5125

- *Interpreter data*: All received Easy Plug data, apart from immediate commands, are transmitted.
- *All data*: All received Easy Plug data, including immediate commands, are transmitted.

Sensor test

For details refer to chapter **Sensor test/adjustment** on page 264.

Print test

General printtest, prints line by line the set printer type and the firmware version. Material settings (Material type, length, width) are considered.

Service done

! Only appears in service mode

Settings	Default setting	Step width	Easy Plug
No, Yes	No	--	--

Increases the counter level of the "Service operations" counter on the "Service Status" printout by one

- **Yes:** Increases the counter "Service operations" by one
- **No:** Doesn't increase the counter

See parameter .

Head exchange

! Only appears in service mode

Settings	Default setting	Step width	Easy Plug
No, Yes	No	--	--

Increases the counter „Head number“ on the info printout „Service Status“ by one

- **Yes:** Increases the counter "Head number" by one
- **No:** Doesn't increase the counter

See parameter .

Roller exchange

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
No, Yes	No	--	--

Increases the counter „Roll number“ on the info printout „Service Status“ by one

- **Yes:** Increases the counter "Roll number" by one
- **No:** Doesn't increase the counter

See parameter .

Serv. data reset

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
No, Yes	No	--	--

Sets all counters on the info printout „Service Status“ to zero.

See parameter .

Sensor Adjust

! Only appears in service mode

For details refer to chapter **Sensor test/adjustment** on page 264.

Matend tolerance

(Material end tolerance)

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
[20...300] mm	35 mm	1 mm	#PC5101

This is relevant for label stock with very long punches. To avoid those punches being recognized as material end by mistake, can here the distance be set, after which the gap over the light sensor is interpreted as material end.

CAUTION!

Risk of damaging the print roller.

► Don't choose a too high material end tolerance, because by doing so, you will lose the protection of the print roller against being printed on.

Feedadjust label

! Only appears in service mode

Prints a scale, which enables to calculate the feed adjust value (see next p-arameter).

For application instructions, refer to chapter „Adjusting the imprint position“..

Feed adjust

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
[-10.0...10.0]% [Ribbon] [-10.0...10.0]% [Direct]	0.0	0.1	#PC5102 ^[80] #PC5105 ^[81]

Corrects the material feed length. Such a correction can be necessary when printing on very long labels, to compensate slippage-related feeding inaccuracy.

For application instructions, refer to chapter „Adjusting the imprint position“..

Forw feed rat.

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
[90.0..110.0]%	100.0%	0.1	#PC1031

Determines the drive ratio for *forward* transport.

Setting	What do the motors do?	Effect
> 100%	Print roll motor rotates <i>faster</i> than draw roll motor	Loop formation at the dispensing edge, in extreme cases the label is not dispensed
100%	Print roll motor and draw roll motor rotate at the same speed	Normal operation

⁸⁰ Print > Material > Label > Print method = "Thermo transfer"

⁸¹ Print > Material > Label > Print method = "Thermal printing"

Setting	What do the motors do?	Effect
< 100%	Print roll motor rotates <i>slower</i> than draw roll motor	The backing material is pulled tighter around the dispensing edge, in extreme cases the draw roll motor jerks and the motor may come to a standstill

Backw feed rat.

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
[90.0..110.0]%	100.0%	1	#PC1032

Determines the drive ratio for *reverse* transport

Setting	What do the motors do?	Effect
> 100%	Print roll motor rotates <i>faster</i> than draw roll motor	The material is pulled tighter around the dispensing edge
100%	Print roll motor and draw roll motor rotate at the same speed	Normal operation
< 100%	Print roll motor rotates <i>slower</i> than draw roll motor	Loop formation at the dispensing edge

Punch y calibr.

! Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
[-3.0...3.0] mm	0.0 mm	0.1 mm	#PC5104

Compensating the variation of distance between punch sensor and thermal bar of the print head.

Model ID

Displays printer type and print head resolution.

Printer Status

A protocol can be printed to get an overview of customer-specific parameter settings.

Memory Status

Prints an overview over:

- Internal Memory Configuration
- Files that are stored on the internal memory (RAM disc or internal flash)
- Files that are stored on an external memory medium (if any)

Font Status

Print samples of all installed characters, bar codes and line samples (several pages):

- Page „Font / Line Library“ shows a list of the internal fonts and line styles.
- The pages titled „Barcode Library“ show print samples of the internal bar c-odes.

Internal fonts:

► Use the font numbers listet in the first column together with an Easy Plug command for text output (e. g. #YT), to print using the appropriate font.

Easy Plug commands: Refer to the Easy Plug Manual, topic section -“Command description“.

FONT / LINE LIBRARY		
Number of Fonts: 20 (internal)		
Font No.	Height	Font Sample
100	0.83	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
101	1.53	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
102	1.53	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
103	2.00	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
104	2.92	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
105	4.50	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
106	2.00	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF
107	2.92	0123456789ABCDEF0123456789ABCDEF0123456789ABCDEF

Fig. 33: Extract of the status printout “Font Status”: List of internal fonts in section „Font / Line Library“.

Internal Line Styles:

► Use the line style number (fist column) with one of the Easy Plug commands #YL or #YR to print lines in the matching style.

Easy Plug commands: Refer to the Easy Plug Manual, topic section -“Command description“.

Additionally, the following line styles are available:

- 13: Checked pattern with 3 dot edge length
- 14: Checked pattern with 1 mm edge length
- 15: Checked pattern with 5 mm edge length

! The line width has to be defined as a multiple of the edge length of the ch-ekced pattern!

Line Style	Line Sample
Type 0	—————
Type 1	- - - - -
Type 2	
Type 3	
Type 4	
Type 5	
Type 6	
Type 7	
Type 8	
Type 9	
Type 10	
Type 11	
Type 12	

Fig. 34: Extract of the status printout “Font Status”: List of internal line styles in section „Font / Line Library“.

Internal bar codes:

The pages titled „Barcode Library“ show print samples of the internal bar codes.

- *Onedimensional bar codes* are printed with the Easy Plug command #YB, see manual Easy Plug, topic section „Command description“.
- *Two-dimensional bar codes* are printed by means of special Easy Plug commands (see table below).
- *GS1 DataBar* (formerly RSS) and *Composite Component* (CC) bar codes are printed by means of the Easy Plug command #RSS. The bar code is determined by the number in the first column of the subsequent table. This number is added to the command as a parameter.

Easy Plug command	Bar code
#IDM	Data Matrix Code
#MXC	Maxi Code
#PDF	PDF 417
#CBF	Codabar F
#CFN	Code 49
#SQR	QR Matrix Code

Table 24: Internal two-dimensional bar codes.

Service Status

Print the Service status report to read about operation time, no. of services, no. of exchanged parts and other matters of service interest (one page).

Use the parameter Tools > Service > Serv. data reset, to set all the counters to zero, which are listed on the printout.

Dottest endless

! Only appears in service mode

(Dottest for application with endless label stock)

This function prints a pattern which enables trained personnel to check the adjustment as well as the function of the print head.

Test pattern:

The „Dottest endless“ or „Dottest punched“ prints a pattern consisting of 33 rows filled with vertical lines on the upper label area. All lines have a constant distance of 4 dot. With every new row, the line pattern is shifted one dot. The resulting line-pattern repeats every four rows. The test pattern shows missing dots clearly as white vertical lines running through the pattern.

The lower label area is filled with testpatterns, which are kept close to those used by the print head manufacturer. The patterns are useful for printout comparison.

The bars underneath the test pattern allow the adjustment of the different zero lines.

Dottest punched

! Only appears in service mode

Dottest for application with punched material.

Reference label

Prints a label with some examples of barcodes, fonts, logos. The table at the bottom end of the label contains the settings or print contrast and print speed, used for printing the label.

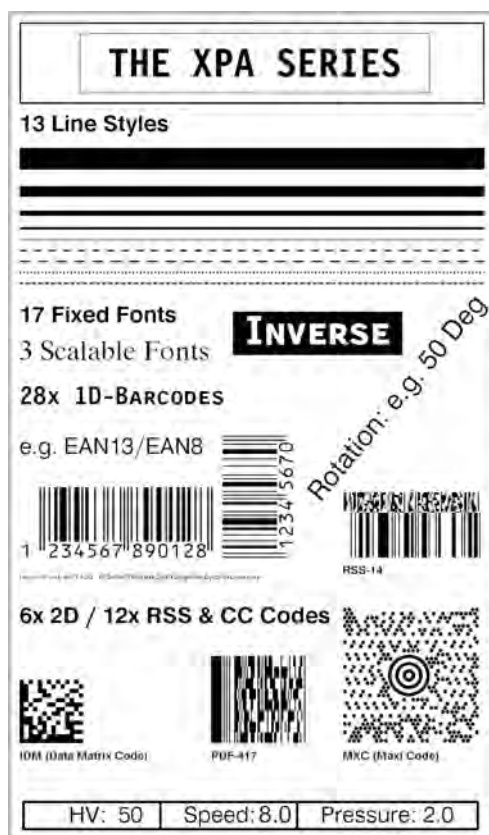


Fig. 35: Reference label printout.

Head run length

! No setting option - Only display

Displays the "travelled path" of the print head.

Parameter in menu	Effect	Easy Plug
Info > Statistics	The data is stored in the machine. Reset after print head exchange with parameter Tools > Service > Head exchange required.	#!PG30018
Info > Statistics > Print head	The data is stored in the memory chip of the print head. Reset is not possible.	#!PG30093

Total head moves

! No setting option - Only display

Shows the total number of head moves.

Parameter in menu	Effect	Easy Plug
Info > Statistics	The data is stored in the machine. Reset after print head exchange with parameter Tools > Service > Head exchange required.	#!PG30024
Info > Statistics > Print head	The data is stored in the memory chip of the print head. Reset is not possible.	#!PG30098

Roll run length

(Run length of the feed roller)

No setting option - Only display	Easy Plug
	#!PG30019

Shows the total "covered distance" of the print roller. The counter is reset with each calling of the parameter Tools > Service > Roller exchange.

Service operations

No setting option - Only display	Easy Plug
	#!PG30014

Shows the number of service operations. The counter is increased by calling the parameter Tools > Service > Service done.

Head number

No setting option - Only display	Easy Plug
	#!PG30015

Shows the number of print head changes. The counter is increased by calling the parameter Tools > Service > Head exchange.

Roll number

No setting option - Only display	Easy Plug
	#!PG30016

Shows the number of exchanged print rollers. The counter is increased by calling the parameter Tools > Service > Roller exchange.

Tot. mat. length

No setting option - Only display	Easy Plug
	#!PG30021

Shows the total "covered distance" of the feed roller. Other than the counter Roll run length, this counter is not reset after a roller exchange.

Tot. ribb. length

No setting option - Only display	Easy Plug
	#!PG30022

Shows the total "covered distance" of the ribbon roller.

Head strobes

 No setting option - Only display

Shows the counted head strobes, which are a measure for the service life of the print head. A strobe is counted for each line in which at least one dot is printed.

Parameter in menu	Effect	Easy Plug
Info > Statistics	The data is stored in the machine. Reset after print head exchange with parameter Tools > Service > Head exchange required.	#!PG30025
Info > Statistics > Print head	The data is stored in the memory chip of the print head. Reset is not possible.	#!PG30094

Operation time

 No setting option - Only display

Parameter in menu	Effect	Easy Plug
Info > Statistics	Shows the elapsed time since the last switch-on of the machine.	#!PG30028
Info > Statistics > Print head	Shows the print head duty cycle. The data is stored in the memory chip of the print head.	#!PG30095

Contrast distribution

 No setting option - Only display

Shows the distribution of the set print contrast over all print operations performed with this print head.

Display	Class	Easy Plug
intrast distributi 0-25%  0.0% 26-50%  0.0% 51-75%  50.0% 76-100%  50.0% 101-120%  0.0%  	0-25% 26-50% 51-75% 76-100% 101-120%	#!PG30224 #!PG30225 #!PG30226 #!PG30227 #!PG30228

Head pressure distribution

! No setting option - Only display

Shows the distribution of the set print head pressure over all print operations performed with this print head.

Display	Class	Easy Plug
ad pressure distr: 1.0-1.5  0.0% 1.6-2.0  100.0% 2.1-2.5  0.0% 2.6-3.0  0.0%  	1.0-1.5 1.6-2.0 2.1-2.5 2.6-3.0	#!PG30229 #!PG30230 #!PG30231 #!PG30232

Thermal distribution

! No setting option - Only display

Shows the distribution of the set printing method (Thermo transfer printing or Thermal printing) over all printing operations performed with this print head.

Display	Class	Easy Plug
Thermal distribut: Transfer  100.0% Direct  0.0%  	Transfer Direct	#!PG30096 #!PG30097

Print speed distribution

! No setting option - Only display

Shows the distribution of the set print speed over all print operations performed with this print head.

Display	Class	Easy Plug
Print speed distri 2-5 in/s  0.0% 6-9 in/s  100.0% 10-13 in/s  0.0% 14-16 in/s  0.0%  	2-5 in/s 6-9 in/s 10-13 in/s 14-16 in/s	#!PG30233 #!PG30234 #!PG30235 #!PG30236

Total Operation

No setting option - Only display	Easy Plug
	#!PG30082

Shows the total operation time that is the sum of all operation times.

System version

No setting option - Only display	Easy Plug
	#!PG30004

Shows the firmware version number.

System revision

No setting option - Only display	Easy Plug
	#!PG30067

Shows a consecutive revision number.

 Only for factory-internal use.

System date

No setting option - Only display	Easy Plug
	#!PG30070

Shows the date, at which the firmware was generated.

Operator panel

No setting option - Only display	Easy Plug
	#!PG30059

Shows the firmware version of the operator panel.

Ribbon unwinder

No setting option - Only display	Easy Plug
	#!PG30521

Shows the firmware version of the ribbon unwinder control.

Ribbon rewinder

No setting option - Only display	Easy Plug
	#!PG30541

Shows the firmware version of the ribbon rewinder control.

Material pull

No setting option - Only display	Easy Plug
	#!PG30561

Shows the firmware version of the material draw motor control.

Material rewind

No setting option - Only display	Easy Plug
	#!PG30581

Shows the firmware version of the material rewinder control.

TPH power

No setting option - Only display	Easy Plug
	#!PG30601

Shows the firmware version of the distributor board.

BasicIO

No setting option - Only display	Easy Plug
	#!PG30621

Shows the firmware version of the “BasicIO” board.

BasicUSI

No setting option - Only display	Easy Plug
	#!PG30921

Shows the firmware version of the “BasicUSI” board.

8IO 1

No setting option - Only display	Easy Plug
	#!PG30641

Shows the firmware version of the 1st “8IO” board.

8IO 2

No setting option - Only display	Easy Plug
	#!PG30741

Shows the firmware version of the 2nd “8IO” board.

8IO 3

No setting option - Only display	Easy Plug
	#!PG???

Shows the firmware version of the 3rd “8IO” board.

Version

No setting option - Only display	Easy Plug
	#!PG30672

Shows the version number of the power supply, e. g. “AA”.

Resolution

No setting option - Only display	Easy Plug
	#!PG30689

Shows the print head resolution, e. g. “12.00” (dpi).

Width

No setting option - Only display	Easy Plug
	#!PG30690

Shows the print head width, e. g. “106.67” (mm).

Resistance

No setting option - Only display	Easy Plug
	#!PG30691

Shows the electrical resistance of the print head, e. g. "1330" (Ohm).

RAM memory size

No setting option - Only display	Easy Plug
	#!PG30007

Shows the available RAM memory size.

Spooler size

No setting option - Only display	Easy Plug
	#!PG30092

Shows the memory size for the data buffer.

Space for Jobs

No setting option - Only display	Easy Plug
	#!PG30010

Shows the memory size, which is available for print jobs.

Max. Labellength

No setting option - Only display	Easy Plug
	#!PG30011

Shows the maximum printable label length, which results from the memory allocation.

Custom defaults

No setting option - Only display	Easy Plug
	#!PG30013

There are customer specific parameter settings available that can be used for factory reset purpose. See parameter System > Factory settings.

CPU identifier

No setting option - Only display	Easy Plug
	#!PG30034

Shows the designation of the applied processor.

FPGA version

No setting option - Only display	Easy Plug
	#!PG30037

Shows the FPGA version.

MAC Address

No setting option - Only display	Easy Plug
	#!PG30039

Shows the MAC address, an unchanging board address, which is programmed by the board manufacturer.

CAN MAC address

Shows the CAN MAC address.

 No setting option - Only display	
Module	Easy Plug
Ribbon unwinder	#!PG30527
Ribbon rewinder	#!PG30547
Material pull (control unit of the draw roller)	#!PG30567
TPH power (distribution board)	#!PG30607
BasicIO (board)	#!PG30627
8IO 1(board)	#!PG30647
8IO 2(board)	#!PG30747

Serial number

Shows the serial number that is programmed by the machine or board manufacturer.

 No setting option - Only display
--

Module	Easy Plug
Machine	#!PG30701
CPU board	#!PG30505
Ribbon unwinder	#!PG30525
Ribbon rewinder	#!PG30545
Material pull (control unit of the draw roller)	#!PG30565
TPH power (distribution board)	#!PG30605
BasicIO (board)	#!PG30625
8IO 1(board)	#!PG30645
8IO 2(board)	#!PG30745
Power supply	#!PG30665
Print head	#!PG30685

Manufacturer

Shows the manufacturer of the machine (usually “Novexx Solutions, Germany”).

No setting option - Only display	Easy Plug
	#!PG30703

Production date

Shows the production date that is programmed by the manufacturer of the machine or the board in the form dd.mm.yyyy (d=day, m=month, y=year).

  No setting option - Only display	
Module	Easy Plug
Machine	#!PG30704
CPU board	#!PG30506
Ribbon unwinder	#!PG30526
Ribbon rewinder	#!PG30546
Material pull (control unit of the draw roller)	#!PG30566
TPH power (distribution board)	#!PG30606
BasicIO (board)	#!PG30626
8IO 1(board)	#!PG30646
8IO 2(board)	#!PG30746
Power supply	#!PG30666
Print head	#!PG30686

Product code

Shows the product code of the machine (in the shape xxxx-yy, e. g. E480-01).

No setting option - Only display	Easy Plug
	#!PG30702

Module type

Shows the module type.

 No setting option - Only display

Module	Display	Easy Plug
CPU board	MCPU	#!PG30508
Ribbon unwinder	BLDC	#!PG30528
Ribbon rewinder	BLDC	#!PG30548
Material pull (control unit of the draw roller)	STEP	#!PG30568
TPH power (distribution board)	TPHC	#!PG30608
BasicIO (board)	IOBA	#!PG30628
8IO 1(board)	IOEX	#!PG30648
8IO 2(board)	IOEX	#!PG30748
Power supply	SMPS	#!PG30668
Print head	PRHD	#!PG30688

Module name

Shows the name of the relevant module.

 No setting option - Only display

Module	Easy Plug
CPU board	#!PG30500
Ribbon unwinder	#!PG30520
Ribbon rewinder	#!PG30540
Material pull (control unit of the draw roller)	#!PG30560
TPH power (distribution board)	#!PG30600
BasicIO (board)	#!PG30620
8IO 1(board)	#!PG30640
8IO 2(board)	#!PG30740
Power supply	#!PG30660
Print head	#!PG30680

Module part numb.

Shows the part number of the board with components.

 No setting option - Only display

Module	Easy Plug
CPU board	#!PG30503
Ribbon unwinder	#!PG30523
Ribbon rewinder	#!PG30543
Material pull (control unit of the draw roller)	#!PG30563
TPH power (distribution board)	#!PG30603
BasicIO (board)	#!PG30623
8IO 1(board)	#!PG30634
8IO 2(board)	#!PG30743
Power supply	#!PG30663
Print head	#!PG30683

PS type

No setting option - Only display	Easy Plug
	#!PG30029

Shows the power supply type.

PS Temperature

No setting option - Only display	Easy Plug
	#!PG30072

Shows the current power supply temperature in °C. If for any reason the function is not supported, „??? °C“ is displayed.

Display Version

No setting option - Only display	Easy Plug
	#!PG30059

Shows the version number of the operation panel.

Display serialNr

No setting option - Only display	Easy Plug
	#!PG30068

Shows the serial number of the operation panel.

Ribb. rest length

No setting option - Only display	Easy Plug
	#!PG30087

Shows the calculated remaining ribbon length in meter.

Ribbon diameter

No setting option - Only display	Easy Plug
	#!PG30026

Shows the calculated ribbon diameter: A measurement routine calculates the actual ribbon roll diameter with an exactness of 7.5%.

Ribb. rewinder Ø

No setting option - Only display	Easy Plug
	#!PG30071

Display of the current diameter of the ribbon roll on the rewinding mandrel.

Head temperature

No setting option - Only display	Easy Plug
	#!PG30071

Shows the current print head temperature in °C

Status signals

Setting range	Default setting	Step size	Easy Plug
Off, On	On	--	#PC3250

Switches the signal interface on the BasicIO board on or off.

Extension signals

Setting range	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC3251

Switches the applicator status signals on the 8IO board on or off.

 Since both signals occupy the same connector, only either applicator signals or USI signals can be used. If the applicator signals are activated when the USI signals are switched on, the USI signals are switched off automatically (Options > Selection > USI Signals = "Off").

USI Emulation

Setting range	Default setting	Step size	Easy Plug
Off, Standard, Reduced, Minimal	Standard	--	#PC3252

 The USI emulation provides signals for the machine control that are compatible with the signals of the USI boards on older machine types.

Since both signals use the same connector, only either USI signals or applicator signals can be used. If the USI signals are activated when the applicator signals are switched on, the applicator signals are automatically switched off :

... > Applicator type ≠ "Off" ==> ... > USI Emulation = "Off"

... > USI Emulation ≠ "Off" ==> ... > Applicator type = "Direct Dispense"

This parameter switches the USI signals on or off on the 8IO board. If several 8IO boards are present, this setting affects the first of them (this is the position directly next to the BasicIO board).

- *Off*: no USI signals
- *Standard*: USI signals at both M12 connectors (IO1 and IO2)
- *Reduced*: USI signals at one of the M12 connectors (IO2)
- *Minimal*: Only the USI signals “pause”, “feed” and “reprint” at one of the M12 connectors (IO2)

Mat. OD Sensor 1

Setting range	Default setting	Step size	Easy Plug
Off, Rotation pulse, Level high active, Level low active	Off	--	#PC6050

Concerns the first sensor(s) for the OD control of the label roll.

- *Off*: OD sensor 1 is not being used
- *Rotation pulse*: OD sensor 1 is used as an *internal* OD sensor at the material unwinder.
- *Level high active*: OD sensor 1 is used as an *external* OD sensor (light barrier)(*high* level = active)
- *Level low active*: OD sensor 1 is used as an *external* OD sensor (light barrier)(*low* level = active)

Mat. OD Sensor 2

Setting range	Default setting	Step size	Easy Plug
Off, Rotation pulse, Level high active, Level low active	Off	--	#PC6051

Concerns the second sensor(s) for the OD control of the label roll.

- *Off*: OD sensor 2 is not being used
- *Rotation pulse*: OD sensor 2 is used as an *internal* OD sensor at the material unwinder.
- *Level high active*: OD sensor 2 is used as an *external* OD sensor (light barrier)(*high* level = active)
- *Level low active*: OD sensor 2 is used as an *external* OD sensor (light barrier)(*low* level = active)

Setup Wizards

Setting range	Default setting	Step size	Easy Plug
All, Network, Dispensing	All	--	#PC2089

- *All*: Starts all setup wizards (as after the very first start up of the machine)
- *Network*: Starts the setup wizard for network settings
- *Dispensing*: Starts the setup wizard for dispense settings

Space for RAM disc

No setting option - Only display	Easy Plug
	#!PG30091

Displays the RAM disc memory size in the form "Free memory in MB"/"Available memory in MB".

Storage media

No setting option - Only display	Easy Plug
	#!PG30081

Shows the available storage media.

Internal Flash

No setting option - Only display	Easy Plug
	#!PG30090

Displays the size of the "Internal Flash" memory in the form "Free memory in MB"/"Available memory in MB"..

USB1

 Only with connected USB thumb drive.

No setting option - Only display	Easy Plug
	#!PG30065

Displays the size of the USB thumb drive that was plugged in first in the form "Free memory in MB"/"Available memory in MB".

USB2

 Only with connected USB thumb drive.

No setting option - Only display	Easy Plug
	#!PG30066

Manual Calibrate

Settings	Default setting	Step size	Easy Plug
Yes	--	--	--

For endless material, the label length information is sent in the printjob. For punched material, the label length has to be detected by activating this function.

- Yes: Label length calculation for punched material.

 Activate this function, if label material has changed.

Calibration should be done after changing material, when there are no printjobs loaded in the printer.

Shortcut (display "Home"): press the keys 3+4 simultaneously to activate the calibration.

Darkness

Setting range	Default setting	Step size	Easy Plug
[0...30]	15	1	#PC4002

Print contrast for ZPL printjobs. This setting is modified by printjobs which contain print contrast information. The print contrast set by Print > Print contrast is not influenced by this setting

Label Top

Setting range	Default setting	Step size	Easy Plug
[-240...240] Dots	0	1	#PC4006

Label top offset (y-offset) in dots. Equals the parameter Print > Y - Printadjust, which will be ignored, when ZPL printjobs are printed

Left Position

Setting range	Default setting	Step size	Easy Plug
[-9999...9999]	0	1	#PC4007

Left position offset (x-offset) in dots. Equals the parameter Print > X - Printadjust, which will be ignored, when ZPL printjobs are printed

Error Indication

Settings	Default setting	Step size	Easy Plug
LOW, HIGH, OFF	OFF	--	#PC4010

Selects the way, in which the printer responds in the event of error occurring during printing.

Error level	Setting		
	OFF	LOW	HIGH
0	Ignore	Ignore	Ignore
1	Ignore	Ignore	Display
2	Ignore	Prompt user for action	Prompt user for action

Error Checking

Settings	Default setting	Step size	Easy Plug
Yes, No	Yes	--	#PC4011

Enables or disables error checking, when the printer is handling print fields.

- *Yes*: Error checking is enabled
- *No*: Error checking is disabled

Resolution

Settings	Default setting	Step size	Easy Plug
200 Dpi, 300 Dpi	300 Dpi	--	#PC4009

Print resolution in dpi. A 200 Dpi graphic printjob can be printed with a 300 Dpi print head.

305 DPI Scaling

Settings	Default setting	Step size	Easy Plug
Yes, No	Yes	--	#PC4012

Enables the printer to emulate the printing with a 11.8 dots/mm print head.

When a printjob is designed for a printer that uses ZPL with 300 dpi (11.8 dots/mm) and is to be printed on a printer with a resolution of 12 dots/mm, this parameter has to be set to "Yes".

- *Yes*: 305 dpi scaling on
- *No*: 305 dpi scaling off

Image Save Path

Settings	Default setting	Step size	Easy Plug
Drive C:, Internal RAM	Internal RAM	--	#PC4013

Selects the memory to be used by the ^IS and ^IL commands.

 Interpreter Version: 1.10 or higher.

- *Drive C:*: Memory, to which „Drive C:“ points; as a standard, this is an external storage medium (SD card)
- *Internal RAM*: Internal printer memory (RAM)

Label Invert

Settings	Default setting	Step size	Easy Plug
Disable, Enable	Disable	--	#PC4017

Rotates the printout by 180°. Equals the parameter Print > Format > Print direction, which will be ignored, when ZPL printjobs are printed

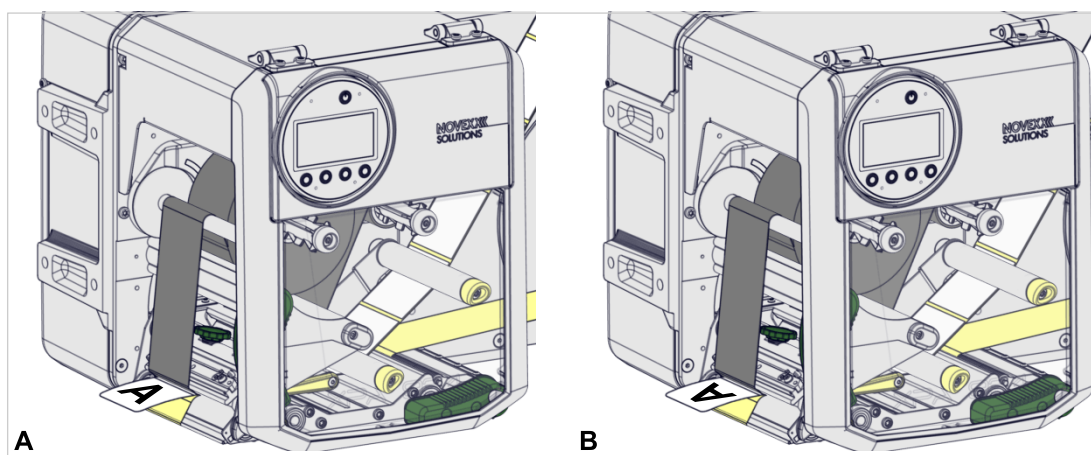


Fig. 36: Orientation of the printout: Setting "Disable" (A) or "Enable" (B).

- *Disable*: The label is printed with „normal“ orientation (A).
- *Enable*: The label printout is rotated by 180° (B).

Format Prefix

Setting	Default setting	Step size	Easy Plug
xxH	5EH ^[82]	--	#PC4004

Indicates the start of a ZPL format instruction.

Control Prefix

Setting	Default setting	Step size	Easy Plug
xxH	7EH ^[83]	--	#PC4003

Indicates the start of a ZPL control instruction.

Delimiter Char

Setting	Default setting	Step size	Easy Plug
xxH	2CH ^[84]	--	#PC4005

Used as a parameter place marker in ZPL format instructions.

⁸² 0x5E = „Caret“

⁸³ 0x7E = „Tilde“

⁸⁴ 0x2C = „Comma“

Command ^PR

Settings	Default setting	Step size	Easy Plug
Disable, Enable	Enable	--	#PC4014

- *Disable*: The print rate sent in the ZPL printjob is ignored.
- *Enable*: The print rate is not ignored.

Command ^MT

Settings	Default setting	Step size	Easy Plug
Disable, Enable	Enable	--	#PC4015

- *Disable*: The material type sent in the ZPL printjob is ignored (thermo-transfer or thermo-direct).
- *Enable*: The material type is not ignored.

Command ^JM

Settings	Default setting	Step size	Easy Plug
Disable, Enable	Enable	--	#PC4016

! Interpreter version: 1.32 or higher

The ^JM command changes the printer resolution:

- ^JMA sets the resolution to the default value = print head resolution.
- ^JMB sets the resolution to 200 dpi, if the actual resolution is 300 dpi. If the actual resolution is 200 dpi, this command is ignored.
- *Disable*: The resolution setting sent in the ZPL printjob is ignored.
- *Enable*: The resolution setting is not ignored.

Command ^MD/~SD

Settings	Default setting	Step size	Easy Plug
Disable, Enable	Enable	--	#PC4018

The ZPL commands ^MD and ~SD (set print head darkness value) are processed optionally.

- *Enable*: ^MD- and ~SD are processed
- *Disable*: ^MD- and ~SD are ignored

Printer type

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
XPA 93x LH, XPA 93x RH, XLP 60x, XDM 94x LH, XDM 94x RH, XPM 94x LH, XPM 94x RH, XTP 60x	Depends on the machine type	--	#PC5001

Setting the machine type.

Head disp dist.

Distance print head - dispensing edge.

! Only, if Dispenser > Dispensing edge = "User defined"

Setting range	Default setting	Step size	Easy Plug
[10.0..250.0] mm	24.5 mm	--	#PC2001

Application mode

Setting range	Default setting	Step size	Easy Plug
Save mode, Immediate mode	Immediate mode	--	#PC2035

- *Save mode*: The next label to be printed is only pulled back under the print head after a start signal has been applied. This setting is advantageous if materials with strong adhesive are used which would otherwise not adhere to the applicator during retraction.
- *Immediate mode*: Immediately after the label just printed has reached the dispensing position, the next label to be printed is pulled back under the print head. The dispensed label sticks to the applicator.

Materialend error

! Only with Options > Material OD Sensor > Mat. OD Sensor 1 = "Rotation pulse" or Options > Material OD Sensor > Mat. OD Sensor 2 = "Rotation pulse".

Setting range	Default setting	Step size	Easy Plug
[40...500] mm	60	1	#PC2075

Defines the diameter threshold for the material roll. If the (calculated) material roll diameter is below the threshold value, the following status message appears:

```
Status num: 5071
Material end unw
```

An additional material end error is caused, if no unwinder rotation is detected during at least 600 mm of material feeding:

```
Status num: 5072
Material end unw
```

Materialend warning

! Only with Options > Material OD Sensor > Mat. OD Sensor 1 = "Rotation pulse" or Options > Material OD Sensor > Mat. OD Sensor 2 = "Rotation pulse".

Setting range	Default setting	Step size	Easy Plug
[40...500] mm	80	1	#PC2074

Defines the diameter threshold for the material roll. If the (calculated) material roll diameter is below the threshold value, the following warning appears:

Material low

Material low signaling

Setting range	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC3284

Refers to the output signal `usi.warning`, which signals the approaching end of the foil or material.

- *Off*: No warning signal.
- *On*: High when the material supply falls below the threshold value (Options > BasicIO > Material OD Sensor > Materialend warning).

Ext. OD sensor

! Only with Options > Material OD Sensor > Mat. OD Sensor 1 = "Level high active" or "Level low active" or Options > Material OD Sensor > Mat. OD Sensor 2 = "Level high active" or "Level low active".

Setting range	Default setting	Step size	Easy Plug
Off, Warning, Error	Off	--	#PC6022

Determines the machine's response to a signal from an (optional) external OD sensor.

- *Off*: No response
- *Warning*: The machine displays a warning
- *Error*: The machine displays an error message

User modified

! Only appears in service mode

This submenu contains shortcuts to all parameters that have been changed by the user, i.e. whose settings differ from the factory settings. This function can be very useful for problem analysis.

The following parameters are *not* listed even after modification: Printer type, Printhead type and Setup Wizards.

This parameter list also appears in the setup file (`Setup.for`).

Head idle adjust

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
[-30...+31]	0	1	#PC5137

Parameter for adjusting the print head idle position.

For details read [Print head idle adjustment](#) on page 269

Delete Dir

Parameter for deleting directories in the internal flash memory.

For details read [Erase data in internal flash memory](#) on page 173.

Copy From USB

! Only appears if an external flash memory is connected to at least one USB interface.

Parameter for copying directories into the internal flash memory.

For details read [Copy data into the internal Flash memory](#) on page 171.

Ribbon autoecon.

(Ribbon automatic economy)

Setting range	Default setting	Step size	Easy Plug
On, Off	Off	--	#PC2087

Switching on the ribbon automatic economy mode in thermal transfer mode interrupts the ribbon feed between print periods. This saves ribbon, particularly with long labels with a minimum print area.

! The ribbon automatic economy mode should only be activated with unprinted areas from at least approx. 10mm in length.

- *Off*: Ribbon automatic economy mode is off
- *On*: Ribbon automatic economy mode is on

Related parameters:

- [Head down lead](#) on page 126
- [Ribb. eco. limit](#) on page 127

Head down lead

! Only with activated ribbon automatic economy mode (Print > Material > Ribbon > Ribbon autoecon. = "On") or with activated head lift function (Print > Material > Label > Print method = "Thermal/headlift").

Setting range	Default setting	Step size	Easy Plug
[0.0..10.0] mm	0.0 mm	0.1 mm	#PC2077

Determines the distance by which the printhead lowers before the first dot to be printed. The function improves the print quality at the beginning of a print area when automatic ribbon economy is activated with thermal transfer printing or when the head lift function is activated in thermo direct printing.

Ribb. eco. limit

(Ribbon economy limit)

! Only with activated ribbon automatic economy mode (Print > Material > Ribbon > Ribbon autoecon. = "On").

Setting range	Default setting	Step size	Easy Plug
[20..100.0] mm	10.0 mm	0.1 mm	#PC2019

The ribbon economy limit determines the length of the printing free area on the label from that on the ribbon economy automatic should be activated.

Feed mode

Setting range	Default setting	Step size	Easy Plug
Head up, Head down	Head up	--	#PC2058

- *Head up*: The printhead is *lifted* during label material initialization and label feeding..
- *Head down*: The printhead is *down* during label material initialization and label feeding. For certain critical label materials, this setting can result in a better impression accuracy on the first label compared to the following labels.

Periph. device

Setting range	Default setting	Step size	Easy Plug
None, Cutter, Dispenser, LTMA, XApp Stepper	Dispenser (XDM 94x) None (XPM 94x)	--	#PC2031

After installation, options must be selected under "Peripheral device" in order to be assured of the corresponding sensor queries and printer reactions.

CAUTION!

Selecting an incorrect option can lead to malfunctions or damage.

- Before selecting, make sure that the option is present and connected.

- *None*: (XPM 94x only) No peripheral device is installed.
- *Cutter*: (XPM 94x only) Sets the printer firmware to the cutter option. Selection permits access to the cut parameters.
- *Dispenser*: (XDM 94x only) Activates the dispensing option w/o LTMA.
- *LTMA*: (XDM 94x only) Activates both, the applicator and the dispenser options.
- *XApp Stepper*: (Only if stepper motor output stage for periphery is available) Activates the operation of a peripheral motor that is controlled application-specifically via Xapps (for details refer to chapter **XApps** on page 284).

Lab release time

! Only with Options > Direct Dispense > Apply mode = "After print"

Setting range	Default setting	Step size	Easy Plug
[1..99999] ms	0 ms	1 ms	#PC3116

Defines a delay between the dispensing and the start of application of the label.

Start source

Settings	Default setting	Step size	Easy Plug
Foot switch, Light barrier	Light barrier	--	#PC2039

! Only if Options > Selection > Periph. device = "Dispenser".

Choose a signal source for the start signal:

- *Foot switch*: Optional foot switch is used to generate the start signal.
- *Light barrier*: Photoelectric switch at the dispensing edge which detects the taking off of the dispensed label.

! The setting "Light barrier" is unsuitable for product sensors!

MQTT broker

! Only appears in service mode

Setting range	Default setting	Step size	Easy Plug
Off, Internal server, External server	Off	--	#PC1537

- *Off*: No MQTT broker is used
- *Internal server*: A machine internal MQTT broker is used

! Setting for test purposes only. Not recommended for permanent use, since the broker puts too much load on the machine CPU.

- *External server*: An external MQTT broker is used (IP address must be given, refer to MQTT broker IP)

For details, refer to **MQTT support** on page 282.

MQTT broker IP

! Only appears in service mode

Only appears if Interface > Network > Services > MQTT broker = "External server".

Setting range	Default setting	Step size	Easy Plug
[0...255] ^[85]	192.168.1.100	--	#PC1538

⁸⁵ for each xxx-value in xxx.xxx.xxx.xxx

IP address of the MQTT broker which is to be used.

Head-sensor dist

 Parameter appears only in service mode.

Setting range	Default setting	Step width	Easy Plug
[0..400] mm	0 mm	1 mm	#PC2016

(Distance between printline and label sensor)

Special function for setting non-standard punch sensors. Such sensors can be applied in special application devices ("Nistan").

The value x is the distance between thermal edge and punch sensor in millimeters.

0 = disabled (the regular punch sensor is used)

 A „non standard sensor“ must be installed and connected instead of the regular punch sensor.

Machine status level

Settings	Default setting	Step size	Easy Plug
"Level low active", "Level high active"	Level low active	--	#PC3285

Concerns the signal `usi.machinestatus`.

- *Level low active*: The level is low when it is active, otherwise it is high
- *Level high active*: The level is high when it is active, otherwise it is low

Error signal level

Settings	Default setting	Step size	Easy Plug
"Level low active", "Level high active"	Level low active	--	#PC3286

Concerns the signal `usi.error`.

- *Level low active*: The level is low when it is active, otherwise it is high
- *Level high active*: The level is high when it is active, otherwise it is low

Warning signal level

Settings	Default setting	Step size	Easy Plug
"Level low active", "Level high active"	Level low active	--	#PC3287

Concerns the signal `usi.warning`.

- *Level low active*: The level is low when it is active, otherwise it is high
- *Level high active*: The level is high when it is active, otherwise it is low

Input signals

Settings	Default setting	Step size	Easy Plug
"OD1/OD2 input", "reprint/pause input"	OD1/OD2 input	--	#PC3270

Concerns the assignment of the signal inputs in1 and in2 on the BasicIO board:

- *OD1/OD2 input*: in1 = usi.od1; in2 = usi.od2
- *reprint/pause input*: in1 = usi.reprint; in2 = usi.pause

Info

 No setting option - Only display

Shows the note "Custom IO profiles only". This means that the interface must be defined via a specially created JSON profile.

Speed Adaption

Activating the speed adaption function (APSF - **A**utomatic **P**roduct **S**peed **F**ollowing)

Settings	Default setting	Step size	Easy Plug
"On", "Off"	Off	--	#PC6005

- "On": The dispensing speed adapts automatically to match the speed of the conveyor belt. The speed information is detected by a rotary encoder.
- "Off": The dispensing speed remains constant, at the value that was set using parameter Print > Print speed

Encoder Type

Type of rotary encoder used

Settings	Default setting	Step size	Easy Plug
"Single Phase", "2 Phases normal", "2 Phases invert."	Single Phase	--	#PC6006

- "Single Phase": Setting for single phase rotary encoder
- "2 Phases normal": Setting for normal 2 phase rotary encoder
- "2 Phases invert.": Setting for inverted 2 phase rotary encoder

Encoder Resol.

Resolution of the rotary encoder used

Setting range	Default setting	Step size	Easy Plug
[0...9999] pulses/turn	500	1	#PC6008

Encoder Diameter

Diameter of the measuring wheel at the rotary encoder used

Setting range	Default setting	Step size	Easy Plug
[0.0...200.0] mm	64.0	0.1	#PC6009

Min. APSF Speed

The minimal admissible speed in APSF mode

Setting range (Inch/s)	Default setting	Step size	Easy Plug
[3.0...8.0] Inch/s	3.0 Inch/s	0.1 Inch/s	#PC6048

Setting range (mm/s)	Default setting	Step size	Easy Plug
[76...203] mm/s	76 mm/s	1 mm/s	#PC6048

 The speed unit can be switched between Inch/s and mm/s (see parameter **Speed unit** on page 131).

Sensor type

Determines the installed sensor type.

Settings	Default setting	Step size	Easy Plug
Standard, Combined sensor	Standard	--	#PC5006

- *Standard*: Light transmission sensor.

 With this setting, only the "Punched" setting is available for selection in the Print > Material > Label > Label sens. type parameter.

- *Combined sensor*: Combination of light transmission and reflex sensor.

 With this setting, the "Punched" and "Reflex" settings are available for selection in the Print > Material > Label > Label sens. type parameter.

Speed unit

Specifies the unit for all parameters that define a speed.

Settings	Default setting	Step size	Easy Plug
Inch/s, mm/s	Inch/s	--	#PC2002

PDF print quantity

Setting range	Default setting	Step size	Easy Plug
[1..65535]	1	1	#PC4604

Scale to Label

Settings	Default setting	Step size	Easy Plug
Yes, No	No	--	#PC4601

Scales the printout.

- **Yes:** Scales the PDF to the set label size (Material length, Material width). The aspect ratio is retained.
- **No:** Scales the PDF as set in the Manual scaling parameter (see **Manual scaling** on page 132). The aspect ratio is retained.

Manual scaling

! Only with Printer Language > PDF Setting > Scale to Label = "No"

Setting range	Default setting	Step size	Easy Plug
[10..1000]%	100%	1%	#PC4605

Defines the (manual) scaling.

Blick./white threshold PDF obj.

Setting range	Default setting	Step size	Easy Plug
[10..90]%	50%	1%	#PC4609

Blick./white threshold graphic **Blick./white threshold graphic** on page 132

View on PC	Threshold value	Printout
Das ist ein Test! Das ist ein Test! Test!Das ist ein Test!Das ist ein Test!	10%	Das ist ein Test! Das ist ein Test! Test!Das ist ein Test!Das ist ein
	50%	Das ist ein Test! Das ist ein Test! Test!Das ist ein Test!Das ist ein Test!
	90%	Das ist ein Test! Das ist ein Test! Test!Das ist ein Test!Das ist ein Test!

Table 25: Effect of the threshold value for black and white objects.

Blick./white threshold graphic

Setting range	Default setting	Step size	Easy Plug
[10..90]%	50%	1%	#PC4607

Determines the threshold value above which the renderer considers a pixel in a graphic object to be black or white.

View on PC	Threshold value	Printout
	10%	
	27%	
	50%	
	77%	
	90%	

Table 26: Effect of the threshold value for graphic objects.

Rotate 90°

Settings	Default setting	Step size	Easy Plug
Yes, No	No	--	#PC4606

Causes the PDF bitmap to rotate by 90° clockwise.

- **Yes:** The bitmap is rotated by 90°
- **No:** The bitmap is not rotated

EasyPlug imm. support

Settings	Default setting	Step size	Easy Plug
Yes, No	No	--	#PC4600

Additional interpreter for Easy Plug immediate commands with its own communication interface. To ensure that various printer functions and settings remain usable, a second interpreter can be opened on a different interface that supports Easy Plug immediate commands.

- **Yes:** Interpreter for Easy Plug immediate commands is *on*. The EasyPlug imm. interface parameter for selecting the interface is displayed (see **EasyPlug imm. interface** on page 134).
- **No:** Interpreter for Easy Plug immediate commands is *off*

EasyPlug imm. interface

! Only with Printer Language > PDF Setting > EasyPlug imm. support = "Yes"

Settings	Default setting	Step size	Easy Plug
Serial Com1, TCP/IP SOCKET, LPD server, USB, Auto negotiation ^[86]		--	#PC4602

Determines the communication interface for the Easy Plug immediate command interpreter.

! Each interface can only be used once, either by the PDF interpreter or by the immediate command interpreter.

An exception is the TCP/IP interface, which can be assigned twice. In this case, a different port must be assigned for the PDF interpreter (Interface > Network > Port address, see **Port address** on page 93) than for the immediate command interpreter (Printer Language > PDF Setting > EasyPlug imm. port, see below).

EasyPlug imm. port

! Only with Printer Language > PDF Setting > EasyPlug imm. support = "Yes"

and with Printer Language > PDF Setting > EasyPlug imm. interface = "TCP/IP SOCKET"

Setting range	Default setting	Step size	Easy Plug
[1024..65535]	9110	--	#PC4603

Address of the port on which the Easy Plug immediate command interpreter is listening.

Label start detection

! Only with APSF board installed.

Settings	Default setting	Step size	Easy Plug
[Rising edge, Falling edge]	Rising edge	--	#PC5250

Determines whether the rising or falling edge of the sensor signal is interpreted as the start of the label.

⁸⁶ The available settings depend on the assignment of the print interface (see **Print interface** on page 87). If Print interface = "Auto negotiation", only TCP/IP SOCKET is available here, as only this interface can be assigned twice.

Head-sensor dist

! Only with APSF board installed.

Setting range	Default setting	Step width	Easy Plug
[20..400] mm	80 mm	1 mm	#PC5251

Distance between print line and alternative label sensor at the APSF board.

Mat. OD Sensor

! Only with installed Basic-USI board and
only with an OD sensor connected there.

Setting range	Default setting	Step size	Easy Plug
Off, Rotation pulse, Level high active, Level low active	Off	--	#PC6053

Concerns the sensor for the OD control of the label roll.

- *Off*: The OD sensor is not being used
- *Rotation pulse*: The OD sensor is used as an *internal* OD sensor at the material unwinder.
- *Level high active*: The OD sensor is used as an *external* OD sensor (light barrier)(*high* level = active)
- *Level low active*: The OD sensor is used as an *external* OD sensor (light barrier)(*low* level = active)

! Connecting OD sensors: refer to chapter .

Spooler size

! Only appears in service mode

Settings	Default setting	Step size	Easy Plug
[8192 KB, 976 KB]	8192 KB	--	#PC1105

Adjustment of the memory capacity of the printer command buffer.

- *8192 KB*: Standard setting
- *976 KB*: Setting the value to 976 KB (999424 Bytes) ensures that the #!Xn command always returns the right number of bytes still available in the spooler buffer (6 digits). This adjustment will show 999424 within the #!X0 response, if the spooler is empty.

Electronics

! No setting option - Only display

Displays the article number of the assembled circuit board (PCA) including the change index.

Module	Easy Plug
CPU board	#!PG30513
Ribbon unwinder	#!PG30533
Ribbon rewinder	#!PG30553
Material pull (control of the material draw roller)	#!PG30573
TPH power (distribution board)	#!PG30613
BasicIO(board)	#!PG30633
BasicUSI(board)	#!PG30933
8IO 1(board)	#!PG30653
8IO 2(board)	#!PG30
APSF(board)	#!PG31053

Head up limit

 Only with activated head lift function (Print > Material > Label > Print method = "Thermal/headlift").

Setting range	Default setting	Step size	Easy Plug
[2.0..100.0] mm	10.0 mm	0.1 mm	#PC3006

The head up limit determines the length of the printing free area on the label from that on the head lift function should be activated.

Static teaching

Teach function for the optional clear label sensor.

For details refer to chapter [Static teaching of the integrated clear label sensor](#) on page 272.

Dynamic teaching

Teach function for the optional clear label sensor.

For details refer to chapter [Dynamic teaching of the integrated clear label sensor](#) on page 270.

EMMC Name

No setting option - Only display	Easy Plug
	#!PG30514

Display of the EMMC name on the CPU board.

 Display only possible if the CPU board has at least index level -004 (N101605-004), otherwise "Not Assigned" is displayed.

U-Boot Version

No setting option - Only display	Easy Plug
	#!PG30515

Display of the U-Boot version on the CPU board.

! Display only possible if the CPU board has at least index level -004 (N101605-004), otherwise "Not Assigned" is displayed.

TD wrong head error

Settings	Default setting	Step size	Easy Plug
On, Warning, Off	On	--	#PC2106

Settings for displaying the error message

```
Status num: 9059
Printhead not recommended
for Thermal Direct print
```

- **On:** The error message "Printhead not recommended for Thermal Direct print" appears in the following cases:
 - During system startup
 - After setting the Print > Material > Label > Print method parameter to "Thermal printing"
- **Warning:** Same as the "On" setting, except that a warning is displayed instead of an error message (self-confirming)
- **Off:** No error message or warning is displayed

! This setting is not recommended.

Parameter Reference (Applicators)

Apply mode

Setting range	Default setting	Step size	Easy Plug
After start sig., After print, After custom start sig.	After start sig.	--	#PC3102

Defines, if the application process starts with applying ("After start sig.") or with printing ("After print"). Requirements: Printjob transferred, machine is ready for operation.

- **After start sig.:** The start signal triggers the application of an already printed and dispensed label. After applying the label, the next one is immediately printed and dispensed.
- **After print:** The start signal triggers the retraction under the print head, printing, dispensing and application of a label.
- **After custom start sig.:** Enables the application process to be controlled via XApps.

TouchDownTimeout

! Only at applicators that work with a touchdown sensor: LA-TO TD, LA-TO BO Sensor, LTP/LTPV

Setting range	Default setting	Step size	Easy Plug
Off, (100...99999) ms	Off	--	#PC3117

Timeout at the touchdown sensor. This time specifies the maximum wait time for the touchdown trigger event.

- *Off*: The timeout function is switched off. The applicator only moves back when the touchdown event has taken place. If the event does not take place (no TD signal), it waits indefinitely..
- *xxxx ms*: If the specified time xxxx ms is exceeded without the touchdown event, the applicator continues operation in the same manner as the touchdown event would have taken place. *No* error message will appear in this case.

Touch down sens.

! Only sensor-controlled applicators: LA-TO TD, LA-TO BO Sensor, LTP/LTPV

Setting range	Default setting	Step size	Easy Plug
Pulse falling, Pulse rising	Pulse falling	--	--

Determines the switching behavior of the touchdown sensor.

- *Pulse falling*: The *falling* signal edge at the sensor triggers the touchdown event.
- *Pulse rising*: The *rising* signal edge at the sensor triggers the touchdown event.

Dwell time

! Only time-controlled applicators: LA-TO, LA-TO BO Timed, LA-SO

Setting range	Default setting	Step size	Easy Plug
[1..99999] ms	200 ms (LA-SO) 500 ms (LA-TO, LA-TO BO)	1 ms	#PC3106

Determines the time period, during which the applicator is extended.

Is required for time-controlled applicators that are not limited by a touch-down signal.

Blow on time

! Only applicators with blow-on function: LA-TO BO, LA-BO

Setting range	Default setting	Step size	Easy Plug
[0...99999] ms	50 ms (LA-TO BO) 60 ms (LA-BO)	1 ms	#PC3107

Sets the blow-on duration.

Position timeout

Setting range	Default setting	Step size	Easy Plug
Off, (500...99999) ms	2000 ms	1 ms	#PC3109

- *Off*: The timeout function is switched off. Compressed air is applied to the applicator until the home or end position signal is received. If no signal is received, the applicator continues to try to reach the respective end position. No error message is displayed.
- *xxxx ms*: Determines the length of time after which an applicator position error is displayed as an error. A position error is considered to have occurred if the applicator has failed to reach the home or the end position within the set timeframe.

Corresponding error messages:

Status num: 5200
Home position

Status num: 5201
End position

Restart delay

Setting range	Default setting	Step size	Easy Plug
[0...99999] ms	0 ms	1 ms	#PC3108

Determines the length of time after application for which no start signals will be accepted.

Apply comp. time

Setting range	Default setting	Step size	Easy Plug
[0...99999] ms	0 ms	1 ms	#PC3111

Compensation time for applicator stroke time; required for variable conveyor speed operation.

 Most applicators have a constant stroke time. If the labeller or the print & apply system is driven with variable speed, this leads to different label positions on the product. With a slow conveyor speed, the touch down comes too early, with a high conveyor speed, it is too late. With the stroke time entered in the Apply comp. time parameter, the system corrects this effect, and therefore improves the labelling precision.

Setting instruction:

- ▶ Setup the (print-)dispense-apply-process with a slow conveyor speed.
- ▶ Turn the conveyor speed high.
- ▶ Adjust the labelling position by increasing the Apply comp. time step by step, until the labelling position is correct.

Label pres. sensor

Setting range	Default setting	Step size	Easy Plug
Off, On	Off	--	#PC3119

Activates the “label-present sensor” if the applicator has one. The sensor checks whether a label is present on the applicator. Depending on the design, this can be done before or after application. Depending on the design, it is evaluated as an error if no label is present before application, or if a label is still present on the applicator after application:

```
Status num: 5215
Label on appl
```

```
Status num: 5216
No label on appl
```

Stop lag time

Setting range	Default setting	Step size	Easy Plug
[0...1000] ms	80 ms	1 ms	#PC3115

Delay after the label has been detected by the sensor at the end of the applicator. The label feed on the applicator belt stops by the set time after the label is detected.

Stroke length

Settings	Default setting	Step size	Easy Plug
[30..400] mm	400 mm	1 mm	#PC3153

! Only with installed and activated LTMA.

CAUTION!

Risk of malfunction if the stroke length is set incorrectly.

► Set the stroke length on the LTMA 80/200 to a maximum of 190 mm.

If the applicator foot reaches the stroke length without touching a product, it returns automatically to home position and the printer shows an error message. For applications with short stroke length, the stroke length can be reduced accordingly.

Appl. waitpos.

(Applicator waiting position)

Settings	Default setting	Step size	Easy Plug
[Off, 20..250] mm	Off	1 mm	#PC3154

! Only with installed and activated LTMA.

! Only works with the setting Options > LTMA > Apply mode = “After start sig.”.

- **Off** (Value < 20 mm): Waiting position *not* activated: The applicator foot waits in front of the dispensing edge (home position) for the start signal.

- Waiting position activated (value > 20 mm): After the label has been dispensed onto it, the applicator foot moves to a waiting position below the home position. Advantage: shorter application time due to the shorter (rest) stroke.

Applicator speed

Settings	Default setting	Step size	Easy Plug
[80..580] mm/s	350 mm/s	1 mm/s	#PC3155

 Only with installed and activated LTMA.

Setting of the speed, with which the applicator foot approaches the product.

Parameter Reference (RFID)

Read EPC/UID

Test function for reading a specific RFID label.

Function to read and display EPC from a RFID label near the printer antenna. Only RFID labels with the chosen tag type are considered. The function stays in an endless loop until the user cancels by pressing key **X**. In each loop a read attempt is made and if a tag could be read the EPC is displayed^[87] (left image), otherwise a line of "---" chars is displayed (right image).



Write EPC

Test function for writing a specific RFID tag.

Starts an endless write operation (represented by the star moving back and forth between the brackets). The function stays in an endless loop until the user cancels by pressing key **X**. A successful write operation is indicated by "OK" (left image), while an unsuccessful one is indicated by "Fail" (right image).



Power level

Setting range	Default setting	Step width	Easy Plug
[-10...30]	15	1	#PC5208

For details refer to the manual "How-to-RFID", chapter 3.1.6.1

Hotspot test

Performs a test to find the sensitive write zones of the inlay (label).

For details refer to the manual "How-to-RFID", chapter 2.3.6

⁸⁷ Press the arrow keys to display the following characters

Region

Settings			Easy Plug
North America	Malaysia	Japan2 (24dBm with 13 channels)	#PC5209
European Union	Thailand	Japan3 (24dBm with 6 channels)	
India	NA (Reduced FCC region)	Macau	
China	NA (5MHZ FCC band)	Argentina	
Japan	Australia	Philippines	
Korea	New Zealand	Russia	
Taiwan	Hong Kong	Bangladesh	
Vietnam	Israel		
Singapore			
Indonesia			

Specifies the region in which the printer is used. This allows the RFID module's frequency settings to be adjusted to the frequencies required in that region.

For details refer to the manual "How-to-RFID", chapter 3.1.2

Max Tags to stop

Setting range	Default setting	Step width	Easy Plug
[1...10]	1	1	#PC2055

Number of transponders (tags) that have to be invalid in sequence before a printing job is stopped.

This parameter exists because of the assumption that a certain number of invalid transponders in sequence indicate a severe problem. After solving this problem the job can be continued.

For details refer to the manual "How-to-RFID", chapter 2.3.7

Nr of Tags

No setting option - Only display	Easy Plug
	#!PG30100

Shows the number of tags.

Nr. invalid tags

No setting option - Only display	Easy Plug
	#!PG30101

Shows the number of invalid tags.

Rate READ

No setting option - Only display	Easy Plug
	#!PG30108

Rate WRITE

No setting option - Only display	Easy Plug
	#!PG30109

Total Nr. READ

No setting option - Only display	Easy Plug
	#!PG30104

Shows the total number of read operations.

Example: 190

Total Nr. SELECT

No setting option - Only display	Easy Plug
	#!PG30102

Shows the total number of select operations.

Example: 17528

Total Nr. WRITES

No setting option - Only display	Easy Plug
	#!PG30106

Shows the total number of write operations.

Example: 17647

Invalid READ

No setting option - Only display	Easy Plug
	#!PG30105

x%

Invalid SELECT

No setting option - Only display	Easy Plug
	#!PG30103

x%

Invalid WRITE

No setting option - Only display	Easy Plug
	#!PG30107

x%

RFID stat.del.

Sets all RFID counters to zero.

RFID Status

Prints a status printout with RFID specific data.

RFID Status	
System version	: V8.T24393M Apr 22 2026
Printer type	: XLP 604
Nr CMD retries	: 3
Nr invalid tags	: 3
Statistics	
Nr of Tags	: 7043
Nr. invalid tags	: 2788
Total Nr. SELECT	: 7803
Invalid SELECT	: 16%
Total Nr. READ	: 1189
Invalid READ	: 29%
Total Nr. WRITES	: 5483
Invalid WRITE	: 37%
Rate READ	: 45
Rate WRITE	: 46

FW Version

No setting option - Only display	Easy Plug
	#!PG30005

Shows the version number of the firmware that is used by the internal RFID module.

Example: 02.01.07.1C-20.25.01.09-BL23.01.06.00

Module

No setting option - Only display	Easy Plug
	#!PG30006

Shows the type of RFID module that is mounted inside the printer.

Example: M7e Mega

Module Serial Number

No setting option - Only display	Easy Plug
	#!PG30255

Shows the serial number of the installed RFID module.

Example: 30240105903883078+

Definition of Favorites

It is possible to create a Favorites menu item containing a selection of parameters as required. The selection is defined in the `Favorites.json` file in the `/var/novxx/storage/internal/Flash/Customization/` directory of the machine. If this file does not exist, the menu item is not displayed.

Selecting favorites in the web panel

 Favorites are set in the web panel in the machine settings view. To do this, the operator must be logged in to the web panel with the service role.

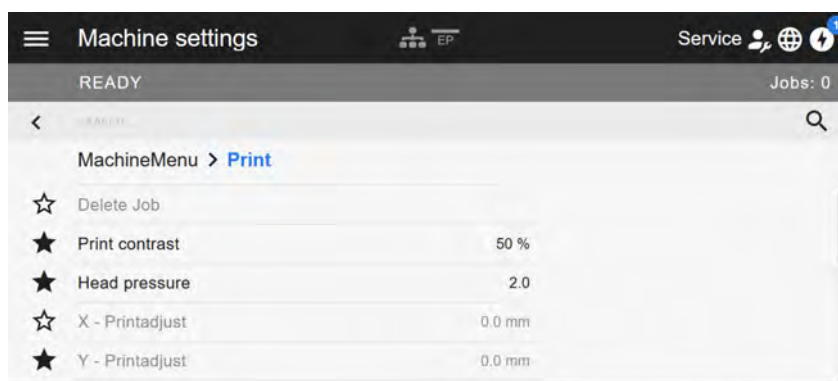


Fig. 37: Machine settings view in the web panel. The stars to the left of the parameters mark the favorites. Filled star = parameter selected for favorites menu.

► Click on the star next to the parameter to select it as favorite (see figure above).

Selecting favorites via JSON file

The directory can be accessed via FTP.

Example:

```
{„Favorites“: {
  „AccessLevel“: „Supervisor“,
  „ParameterIDs“: [
    1003,
    2045,
    1035,
    3107,
    3158,
  ]
}}
```

In case of a JSON syntax error, the following error message appears:

```
Status num: 9050
JSON error
```

Object	Value	Description
AccessLevel	Service, Supervisor, Operator	Defines the access rights for the Favorites menu. For details read the description of the parameter System > Access authoriz..
ParameterIDs	IDs of the required parameters, e. g. 1003 for Print > Print speed	The IDs of the parameters can be found in the parameter description for the relevant parameter under the table title "Easy Plug" or in the setup file (setup.for).

CONNECTIONS

**WARNING!**

This machine operates using mains voltage! Touching live electrical parts may expose you to hazardous electrical currents and may lead to burns.

- Make sure that the machine is switched off before connecting the power cable.
- Only connect the machine to a grounded power socket fitted to authorised standards.
- Only link the machine to devices that fulfil the ES1 circuit requirements specified in EN 62368-1.

CAUTION!

Risk of machine damage due to defective accessories.

- Only connect original accessories.

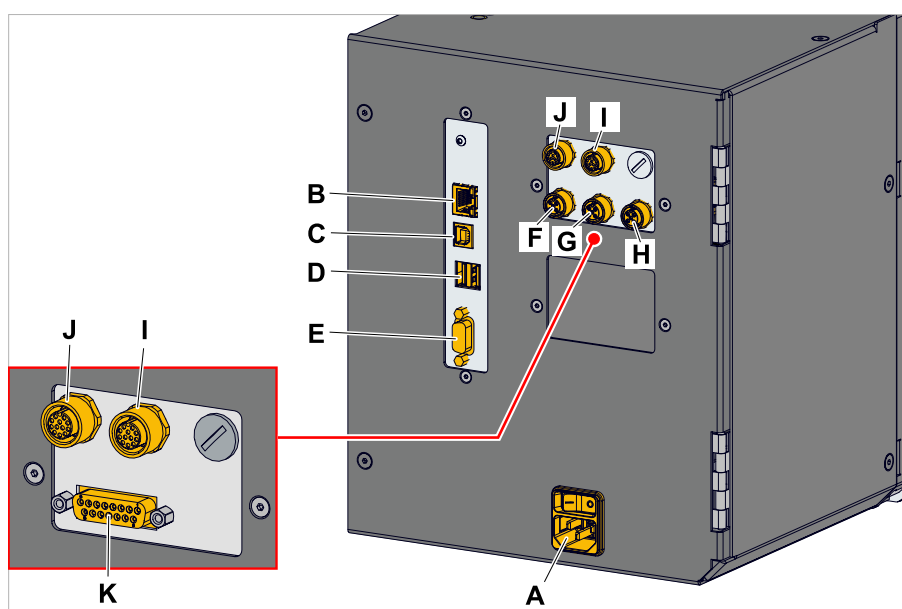


Fig. 38: Connections at a XDM 94x (LH) with "BasicIO" (F-H) or "Basic-USB" (K) and optional "8IO" (I, J) interface boards.

Pos.	Connection	Application
A	Connection to the mains power supply	Power supply
B	Network connection (Ethernet 10/100/1000)	Used to transfer print jobs from a host (for example a PC); transfer firmware; read service data; operation via web server
C	USB interface type B (device)	Used to transfer print jobs from a host (for example a PC); transfer firmware; read service data
D	2 USB interfaces type A (host)	Used to connect devices, for example keyboard or scanner or external memory media
E	Serial interface (RS232)	Used to transfer print jobs from a host (for example a PC); transfer firmware; read service data

Pos.	Connection	Application
F	Start sensor	Triggers the printing dispensing (applying) cycle; suitable for a standard industrial sensor, e.g. Novexx N102106 or N102109
G	Outer diameter (OD) sensor	An OD sensor monitors the roll diameter of the label stock roll on the material unwinder
H	(Optional) Signal interface	Additional applicator signals or USI signals
I	(Optional) Signal interface	Applicator or USI signals; e. g. for connection of an applicator
J	(Optional) Signal interface	Applicator or USI signals; e. g. for connection of an applicator

Related tasks

Connecting to the mains power supply on page 154

Related reference

Connecting to a data host on page 155

Commissioning

SPACE REQUIREMENTS / PERMISSIBLE OPERATING POSITIONS

Space requirements

Accessibility:

- The dimensions of the machine can be seen in the technical data (chapter “Product Description” > “Technical Data” > “Dimensions | Connection Data | Ambient Conditions”)
- On the side of the machine facing the operator, *at least 1 m* free space must be provided for the feeding and changing of consumables.
- The front hood needs approx. 30 cm clearance to swing open
- There must be sufficient clearance on the connection side of the machine to reach the mains switch.

Heat dissipation:

The machine emits heat generated inside to the environment via the housing. To allow heat convection around the machine, the ambient temperature should not exceed the permissible operating temperature even when installed.

Infeed angle:

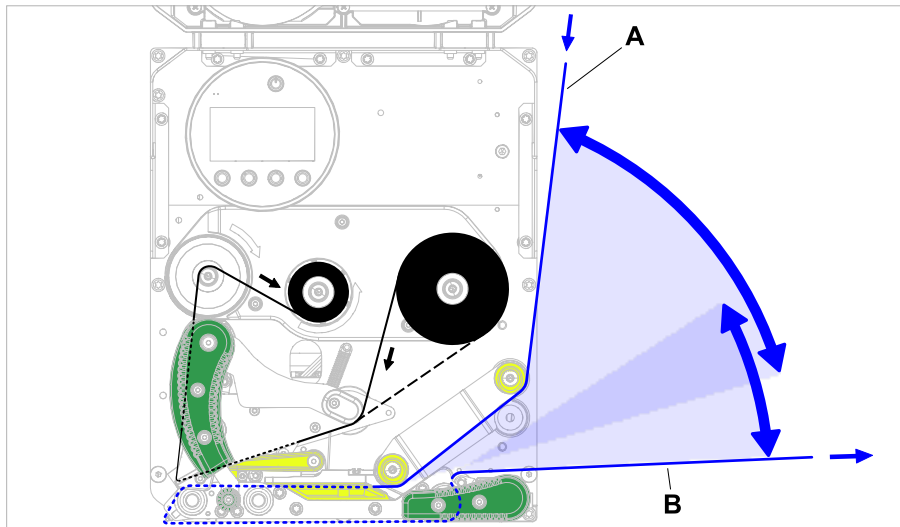


Fig. 39: The infeed angle of the label tape (A) can be varied over a wide range. B: Outfeed angle of the backing material (XDM 94x only).

Permissible operating positions

The XDM 94x and the XPM 94x may be mounted in all operating positions in which the axis of the material unwinder is *not pointing downwards*. These are usually the operating positions for:

- Top labeling
- Side labeling

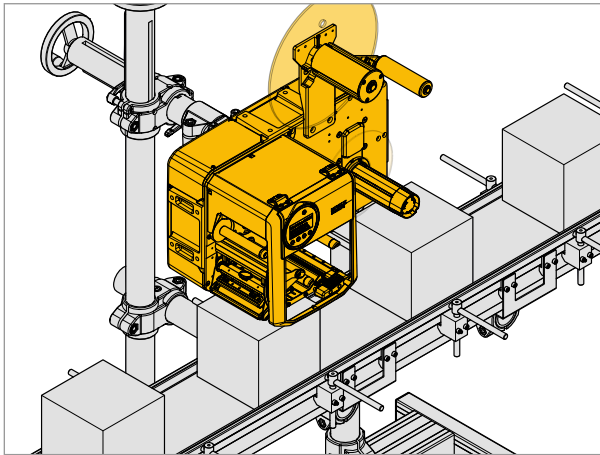


Fig. 40: Operating position for top labeling (here: XDM 94x integrated in an XPA 93x).

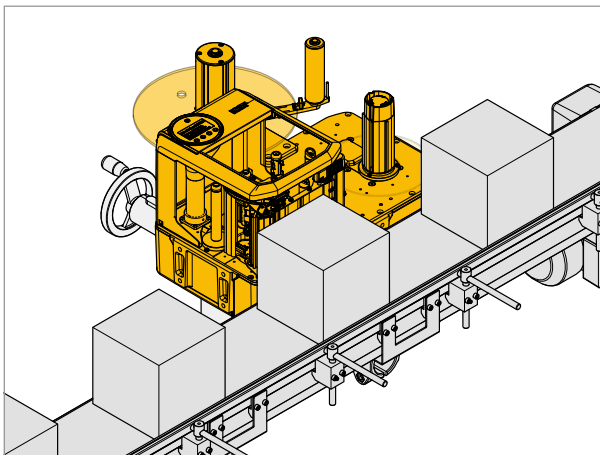


Fig. 41: Operating position for side labeling (here: XDM 94x integrated in an XPA 93x).

Related reference

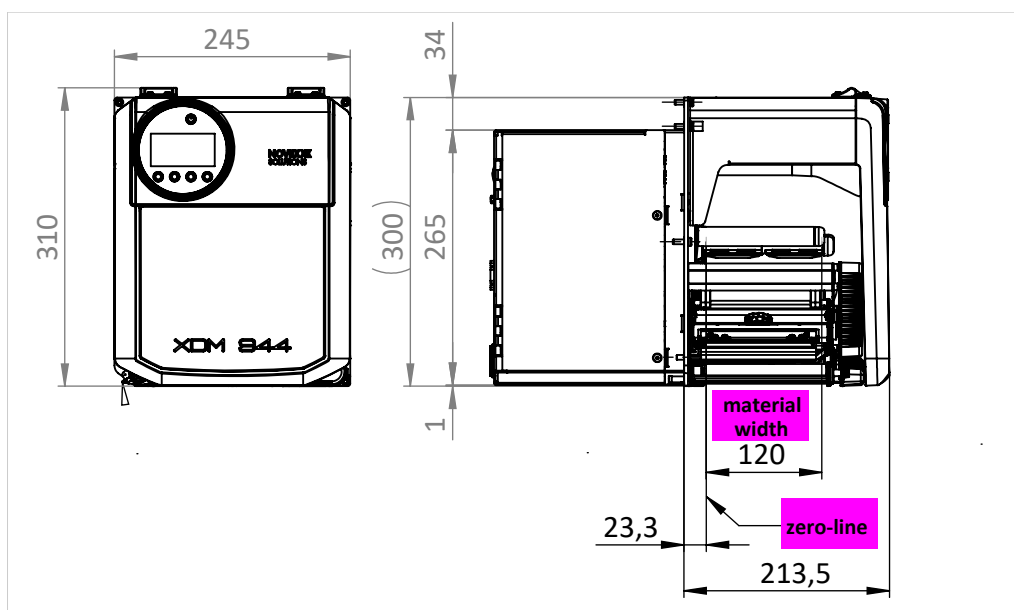
[Dimensions](#) | [Connection Data](#) | [Ambient Conditions](#) on page 11

MOUNTING

Before you begin

- *Zero line:*

Plan the installation of the module so that the base plate of the machine (= contact surface of the label material) has a distance of 23.3 mm from the material zero line (= inner edge of the label web).



• *Panel cut-out:*

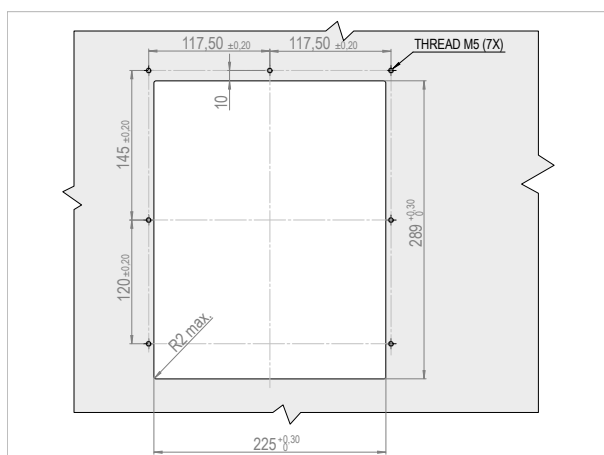


Fig. 42: Required panel cut-out for XDM 94x or XPM 94x.

! Alternatively, the mounting cut-out can be U-shaped, in which case the screw at the top centre is omitted.

• **Screws:**

- 5x or 6x cylinder screws SN4850TX M5x16 8.8 (picture below pos. A, article no. A3889)
- 1x counter sunk screw DIN 7991 M5x12 8.8 (picture below pos. B, article no. A3265)

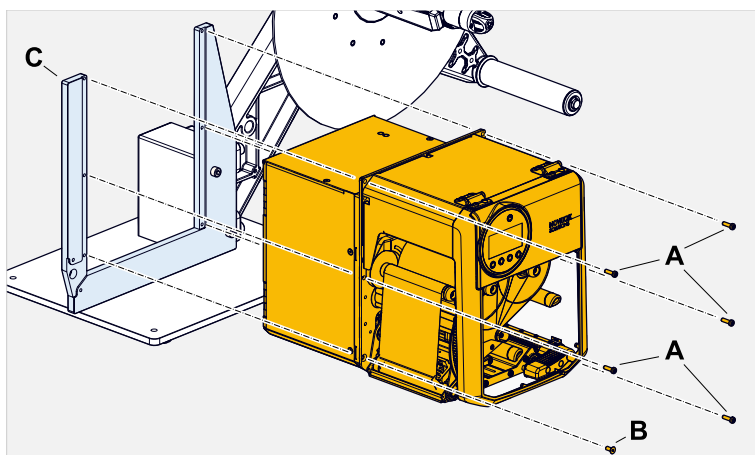
Procedure

CAUTION!

Risk of damaging the front hood.

- Hold the machine by its (metal) casing, not by the (plastic) front cover.

Screw the machine to the frame (C) as shown:



ELECTRICAL CONNECTIONS

Connecting to the mains power supply



WARNING!

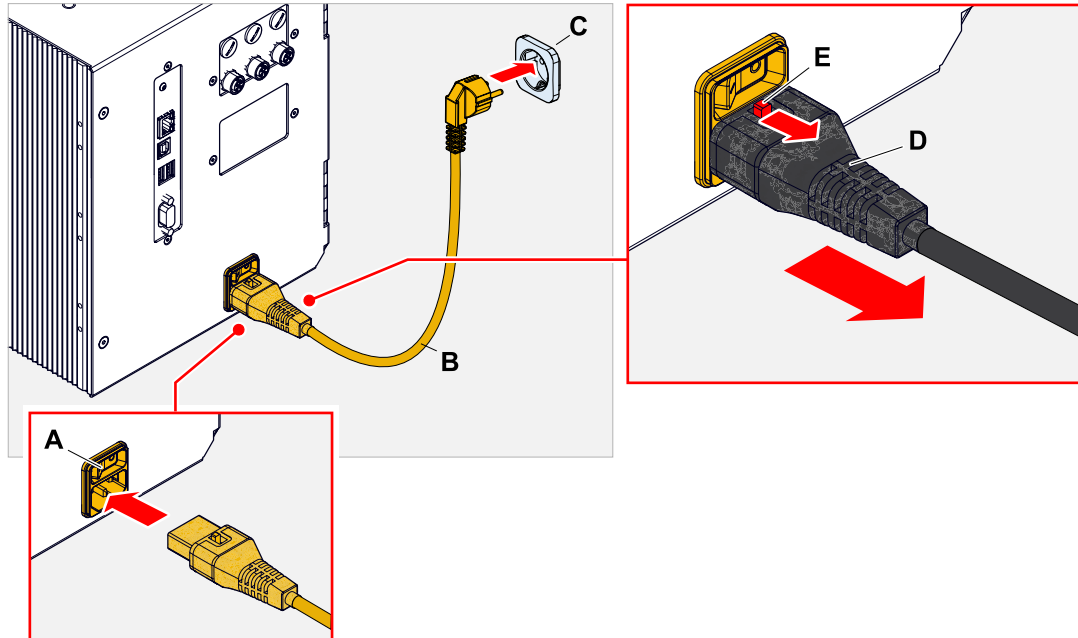
This machine operates at mains voltage! Contacting electrically live components can cause lethal electrical shocks and burns.

- ▶ Make sure that the machine is switched off before connecting the power cable.
- ▶ Only operate the machine at the mains voltage given on the type plate.
- ▶ Only connect the machine to a grounded power socket fitted to authorised standards.

Procedure

Connecting the mains connection cable:

1. Ensure that the machine is switched off (mains power switch (A) in position "O").



2. Connect the machine to a mains power socket (C) using the provided mains connection cable (B).

! Depending on the country of delivery, the mains connection cable may have a different plug for the public power supply than the one shown.

Disconnecting the mains connection cable:

3. (Optional) *Optional locking cable*: Press the locking button (E, figure above) in the direction of the arrow and simultaneously pull off the cable at the plug (D, figure above).
4. *Standard cable*: Pull off the cable at the plug.

Related reference

Connections on page 149

Connecting to a data host

The print data can alternatively be transmitted via one of the data interfaces:

- Ethernet
- USB
- Serial interface

The desired data interface is prompted by the setup wizard the first time you switch on the machine. The default setting is automatic recognition of the data interface.

Without using the setup wizard, the interface type can be selected with the parameter **Interface > Print interface**.

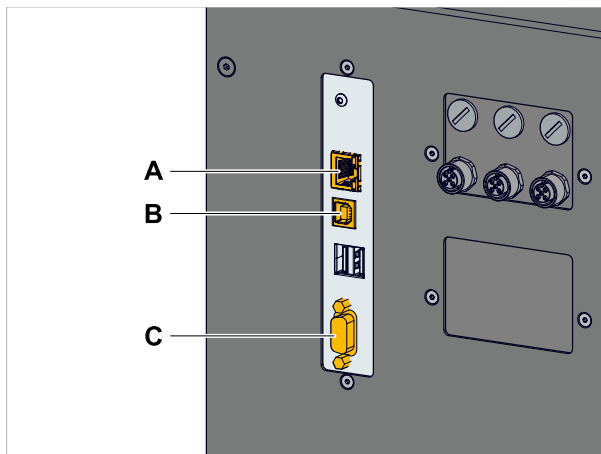


Fig. 43: Data interfaces at the XDM 94x (A Ethernet, B USB, C RS 232).

► Connect the data interface to the data host using a commercially available data cable..

You might have to set other parameters as well, depending on the interface chosen:

- Settings for the serial interface: Interface > Serial Port 1
- Settings for the Ethernet interface: Interface > Network
 - Call the network setup wizard System > Setup Wizards = "Network" to call all relevant parameters automatically.

As an alternative to transmission via a data line, print jobs can also be stored on an external storage medium and called up from there.

Related reference

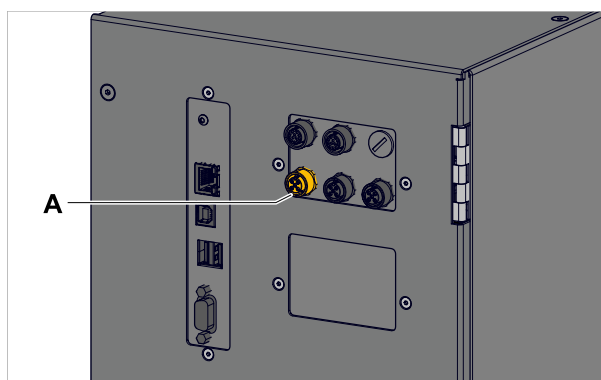
Connections on page 149

Connecting the start sensor

The start or product sensor triggers the print and dispense process. This is often a light barrier that is triggered by the product to be labeled.

Where the start sensor is plugged in depends on which interfaces the machine is equipped with.

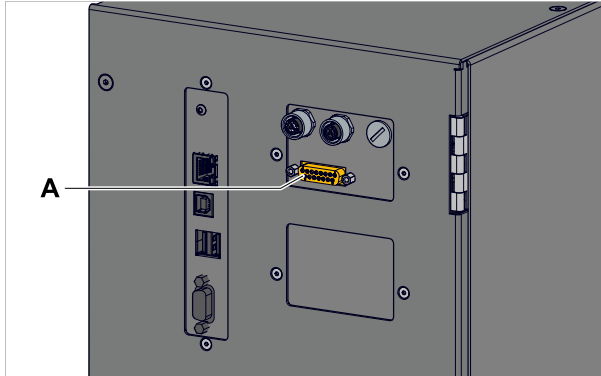
- XDM/XPM 94x with *BasicIO*:



► Connect the start sensor to connector (A, picture above) (M12 4pin).

Article numbers for start sensors:

- N102106 General purpose product start sensor with holder and cable
- N102109 Product start sensor with reflector for specific product shapes and/or reflecting surfaces (e. g. glass, round shaped products) with holder and cable
- XDM/XPM 94x with *Basic-USI*:



► Connect the start sensor to connector (A, picture above) (DSub 15).

Article number for start sensor: A2682

Connecting an external clear label sensor

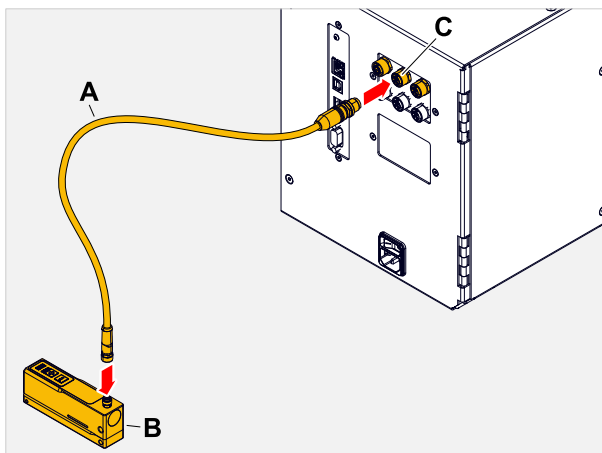
In addition to the label sensor for transparent labels integrated in the machine (see section “Retro-fitting/Upgrading”), NOVEXX Solutions offers a second sensor that is to be mounted (by the customer) outside the machine.

Article numbers:

- N104304 Clear label sensor
- N104309 Connection cable (4pin M8 to M12)

Prerequisites:

- XDM 94x with APSF board (option)
 - The user must ensure optimum material flow, i.e. the material belt must glide over the lower leg of the sensor without fluttering.
- Connect the cable (A) with the smaller plug to the sensor (B) and with the larger plug to the middle connection of the APSF board (C):



► Activating the sensor: Print > Material > Label > Label sens. type = “APSF label sensor”.

! Parameters relevant for the sensor: see submenu Options > Label Sensor > APSF label sensor.

Related tasks

Dynamic teaching of the external clear label sensor on page 273

Static teaching of the external clear label sensor on page 275

Related reference

Connections on page 149

(XDM 94X) ADJUSTING THE DISPENSING EDGE INCLINATION

Depending on the application of the machine, the label is dispensed diagonally downwards (direct dispensing) or forwards (applicator). The inclination of the dispensing edge must be set accordingly.

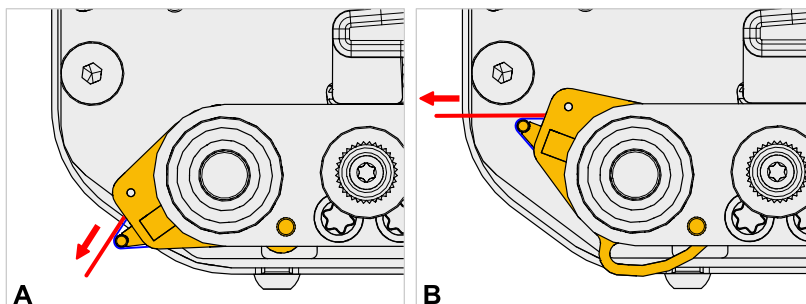
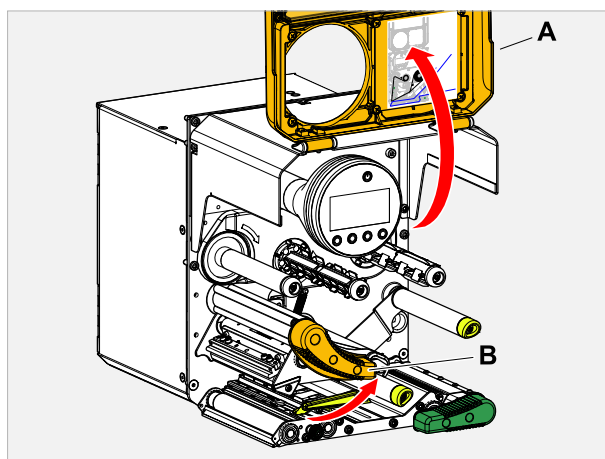


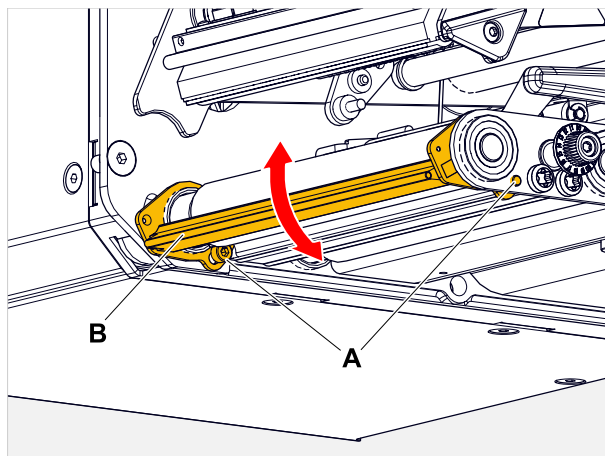
Fig. 44: **A:** Inclination for direct dispensing **B:** Inclination for applicator dispensing.

Procedure

1. Open front cover (A) and print head pressure lever (B)..



2. Loosen the 2 screws (A). Swivel the dispensing edge to the desired position.



3. Retighten screws.

BASIC SETTINGS WITH THE SETUP WIZARD

The setup wizard controls the automatic retrieval of basic settings in the parameter menu that are essential for the operation of the printer.

After the first starting-up of the printer, the display shows the query „Run Setup Wizard?“.

After selecting "Yes", the parameters for the most important basic settings are queried in several groups. The relevant parameters are automatically called up for this purpose. After the basic settings, e.g. for the language or the printer interface, the network and dispense settings are optionally queried (yes/no query in each case).

Which parameters are called also depends on the selection in the preceding parameter. The last step is to display a summary of the settings made (fig. below), which must be confirmed by pressing a key.

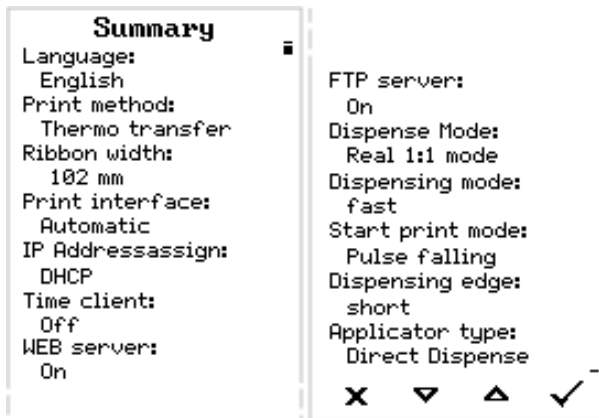


Fig. 45: Summary of the settings done by the wizard (Example, merged by image processing, in fact it must be scrolled to see all lines).

Execute settings:

- Press the key.

A restart takes place and the settings are made.

Discard settings:

- Press the key.

The setup wizard then starts again until either the settings are made or "Run Setup Wizard?" is answered with "No".

If "No" is selected in response to the initial question, the setup wizard will not start and the prompt "Run Setup Wizard?" will not appear even after a restart. There are then two possibilities to carry out the basic settings:

- Call up and set the corresponding parameters manually
- Start the setup wizard manually (parameter System > Setup Wizards)

Special Functions

STANDALONE OPERATION

Requirements and Functions

Requirements

- *External memory medium* (USB thumb drive)
- *Computer*, to write on the memory medium
- (Optional) *Keyboard*, simplifies entry of variable data (see chapter **Functions with external keyboard** on page 163)

Functional Description

Standalone operation means the printer can be operated without it needing to be connected to a host computer. For this purpose, a computer is used to store the print job on a memory medium. After the memory medium is connected to the printer, the operator can start the print jobs on demand. For this, he uses the printer control panel or a keyboard connected to the printer. Variable data can also be entered via the control panel or the external keyboard.

The standalone mode can always be accessed from the „normal“ printer operation.

- Press the keys 2+4 simultaneously.

It is helpful to imagine two consoles, between which can be switched by pressing the keys 2+4.

Console „Normal operation“		Console „Standalone operation“
„Ready“ screen	Keys 2 + 4	Selecting print jobs
„Home“ screen		Inserting field contents
Message mode		Inserting print amounts
„Settings“ screen		Starting print jobs
		Error messages are faded in

Table 27: Functions and display texts in normal and in standalone operation mode.

Standalone operation in brief:

- Printing without computer connection
- Data entry via control panel or keyboard
- Reading print job from an external memory medium
- Entry or selection of field content
- Updating Firmware from an external memory medium

Selecting Files from an External Memory Medium

Before you begin

- The file is stored on an external memory medium (e. g. USB thumb drive) in folder \FORMATS
- The file has one of the extensions .for (print job or setup file) or .tar (firmware)
- Drive letter C : must be assigned to the storage medium (that is, Print interface > Drives > Drive C must be set to that storage medium on which the file with the print job is stored).

Procedure

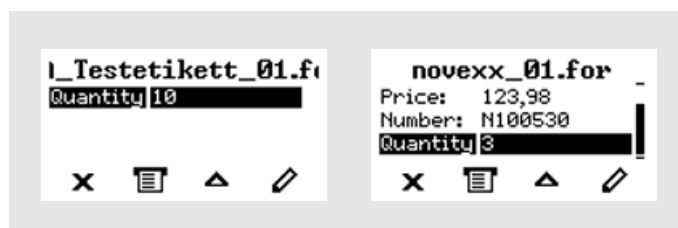
1. Switch off the printer.
2. Connect the memory medium to the printer.
3. Switch on the printer.
The printer shows the “Ready” screen (cyan)
4. Press the keys 2+4 to switch to standalone mode.
A file selection dialog for memory media appears:



5. Select a memory medium and confirm the selection.
A file selection dialog appears, which shows the printjobs stored on the selected memory medium:



6. Select a print job with key 2 and 3. Press key 4 to load the print job.
Another selection dialog appears. As a standard, the print amount can be changed, which is defined as default in the print job (fig. left). Depending on the print job, there can be more than one input fields (fig. right).



7. Press key 2 to start the print job without changing the amount.

! For change of the print amount or of other input values, see fig. below.

If the printer showed the “Ready” screen before switching into standalone mode, the printing starts immediately.

8. Press keys 2+4 to switch to the “Ready” screen.

Related tasks

Data input at the operation panel on page 26

Describes in general terms the input of data at the control panel, which may be required in various environments.

Functions with external keyboard

Suitable keyboards

Keyboards with USB connection are suitable.

 Before first use, check if the intended keyboard really works with the printer.

The matching keyboard layout is set with parameter **Options > Keyboard**.

Key assignment

The keys on the operation panel are assigned to function keys on the external keyboard according to the table below. The function keys and the two additionally listed key combinations work in normal operating mode *and* in standalone mode.

Keyboard key(s)	Printer key	Function
	1	Depends on context
	2	
	3	
	4	
	none	Delete the current print job
	2 + 4	Toggle between normal and standalone mode

Table 28: Assignment of operation panel keys to keyboard keys

The following keys and key combinations on the external keyboard work only in standalone mode:

Keyboard key	Function
	Delete the character left of the cursor
	Confirm a modification
	Discard a modification
	Move the cursor to the left
	Move the cursor to the right
	Insert the selected character into the string
	Jump to the beginning (e. g. of a selection list)
	Jump to the end (e. g. of a selection list)

Quick selection

If an external keyboard is connected, files can be selected from a list by typing in the first letter of the file name.

Example:

After changing to the standalone mode and selecting the memory medium, the following is displayed:



A file named `novexx.for` is supposed to be started.

1. On the keyboard, press the key for the first letter of the wanted file name , e. g. „n“. Display:



The filter icon  stands for the activated filter function. Through the filter appear only those file names that start with „n“ (see fig. above). If another character is typed in, e. g. „o“, only file names that start with „no“ are listed (see fig. below).



 The filter is case sensitive!

Deactivating the filter: press the Esc or Backspace key.

2. Press the enter key (or F8) to select the file.

Executing Different File Types

Executing print jobs

Files with the extension `.FOR` are interpreted as print jobs.

All input fields are polled, which are defined as such in the print job. Next, the print quantity is requested. As soon as the print quantity is confirmed, the print job is executed. From now on, all information about the job is displayed in the “Normal operation” console. While the print job is processed, it is started newly in the “Standalone operation” console. The input fields are polled again, with the previous entries as default.

 Each print job file may contain *only one* print job. If any print job file contains more than one printjobs, only the first print job is executed.

The new start of the print job can be avoided by setting the parameter System > Print > Single-job mode = “Off”.

It's also possible to enter a single “*” for the print quantity. This makes the print quantity “endless”.

Executing firmware files

Files with the extension `.tar` are interpreted as printjobs.



Selecting a firmware file means starting a firmware download. As this is a fundamental intervention to the system, firmware files are not executed immediately.

⁸⁸ All letters lower case or all upper case; „Default.for“ doesn't work

Automatic file execution

If a file named `DEFAULT.FOR`^[88] exists on the memory medium in the folder `\FORMATS`, it is executed automatically at system start.



If a file `\AUTOSTRT.FOR`^[89] is also existing in the root directory, it will be executed first. But be aware that stand-alone print jobs are only executed properly, if the relevant file is stored in the folder `\FORMATS`, as described above.

Insert Input Field in Print job

Input fields can be defined in the following Easy Plug field types:

- Text field
- Counting field
- Barcode field

These field types can be defined through the following Easy Plug commands: YT, YN, YB, IDM, PDF, MXC, CBF, YC, YS, YG.

Using a special syntax it is made clear in these commands that the text dealt with here is not a fixed text, but text requested at the time of implementation.



Further information on the input field syntax can be found in the description of the respective command in the Easy Plug Manual.

Preparing the Example Files

1. Generate two text files with the content shown below.



Tip: Cut out the content using the Acrobat Reader text selection tool and copy it to a text file.

– Example file `TEST.FOR`:

```
#!A1#IMN100/60#ER
#J40#T5#YT107/0///Simple test for#G
#J30#T5#YN100/0/60///STANDALONE Mode#G
#Q3/
```

– Example file `NOVEXX.FOR`:

```
#!A1#IMN100/60#ER
#J40#T5#YN100/0/60///$<Color:>,Lightred#G
#J30#T5#YT107/0///$<Price:>,123,98#G
#J20#T5#YT107/0///$<Articlenumber:>,#G
#J10#T5#YT107/0///Fixtext#G
#Q3/
```

2. Store the two text files as `TEST.FOR` and `NOVEXX.FOR` on the external memory medium in the folder `\FORMATS`.



The file extension must be `*.FOR`!

Filename lettering is *not* case sensitive!

3. Switch off printer.

⁸⁹ Not case-sensitive

4. Connect the external memory medium to the printer.

Example TEST.FOR

1. Turn on printer and toggle to standalone mode.
2. Call up the file `TEST.FOR`.

A dialog showing the standard input field “Quantity” opens. The quantity 3 is set as default, because it is defined in the print job (see fig. below).



Fig. 46: Example “test.for” after start.

To increase the number to 10, for example, proceed as described below. To print the preset quantity unchanged, press key 2.

3. Press key 4.
The text input dialog opens.
4. Press key 1.
The default quantity is erased.
5. Press key 3.
The cursor jumps to the input field.
6. Press key 4.
The number 4 appears in the input field (which was marked before).
7. Press 2x key 2.
The cursor jumps back to the character selection line and marks number 0.
8. Press key 4.
The „0“ is appended in the input field.
9. Press 2x key 4.
The quantity “10” is confirmed and printing starts.

The printer prints the given label quantity.

 Quantity 0 = infinite printing!

Example NOVEXX.FOR

In case of the `NOVEXX.FOR` file, this works somewhat differently. Once the file is called up, the following is displayed:



Fig. 47: Example "novexx.for" after start.

In the first line the printer will ask for the content for the first data field. The text "Color" is a prompt and therefore not printed. The preset content of the print job is called "Lightred".

- *Without keyboard:* After pressing key 4, enter the desired text in characters. Entering letters works in the same way as digit entry (see example TEST.FOR).
- *With a keyboard:* After pressing F8 and deleting the default entry with the backspace key, simply type in a different content.

! The entry may only have a length that ensures the printout does not extend over the label edge! - otherwise a printer error message is displayed!

The next input field is displayed and then the next etc., until all input fields have been processed.

At the end, change the quantity of labels to be printed if required.

Data Input by Interface

Apart from putting in data by operation panel or by external keyboard, the data can be sent via interface.

Application example: Reading in data from a RS232 barcode scanner via serial interface.

Selecting the Interface

- Set Printer Language > EasyPlug Setting > StandAlone Input to the desired interface.

! Listed are only interfaces, which are available in the printer and are not already occupied by another function. The parameter Interface > Print interface must not be set to "Automatic"!

Application Notes

The following characters or character sequences are replaced by *respectively one* „Enter“ action, if received.

- <CR> ^[90]
- <CR><LF>
- <LF> ^[91]
- <LF><CR>

! Data received at the interface are processed *only then*, if the printer is switched to standalone operation.

⁹⁰ <cr> = 0x0D

⁹¹ <lf> = 0x0A

Example

Example of a standalone print job on the memory card:

```

#!A1#DC
#IMSR100.08/100.08
#HV50
#PR8/8/
#RX0
#ERN/1//0
#R0/0
#VTS/Var1//10///Test Var1#G
#VTS/Var2//10///Test Var2#G
#T34.16 #J90.75 #FD/0/L #SS100/BVUN/42X42/0 #VW/L/Var1#G
#T34.08 #J79.58 #FD/0/L #SS100/BVUN/42X42/0 #VW/L/Var2#G
#Q1#G
#!P1

```

The following data is received via the data interface:

Content1<cr><lf>

Content2<cr><lf>

3<cr><lf>

The first two lines assign the content „Content1“ to the variable „Var1“ and the content „Content2“ to the variable „Var2“. The third line assigns the print quantity „3“.

INTERNAL STORAGE

Memory access with the file manager

The integrated file manager of the machine provides access to the following memory:

- internal RAM disk
- internal flash memory
- external storage medium (if available)

At those storage locations, files can be saved, renamed or deleted.

Before you begin

- The machine is connected to a network
- The machine has a valid IP address (assigned by the network administrator or a DHCP server)

 The IP address is displayed on the operation panel when the machine starts up. Alternatively: Call parameter Interface > Network > IP address.

- Host computer with web browser installed on it.

Procedure

1. Start the web browser.

- Enter the IP address of the machine followed by /fm (file manager) in the address field of the web browser.
A query dialog for user name and password appears:



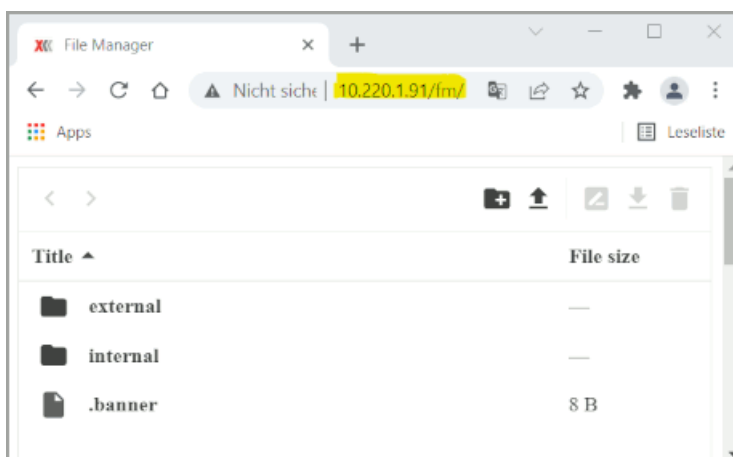
A web browser window showing a 'Sign in' dialog box. The dialog has three input fields: 'Username:', 'Service:', and 'Password:'. The 'Password:' field is masked with dots. Below the fields are two buttons: 'Clear' and 'Sign in'.

- Enter the user name and password in the appropriate fields of the query dialog.

! User Name: One of the "Operator", "Supervisor", or "Service" roles; Password: Numeric string of the corresponding key code, such as 1132 for Operator. The Operator role is read-only.

Results

The directories of the data storage are displayed:



Memory access via FTP

The integrated FTP^[92] server of the machine provides access via FTP to the following machine memory:

- internal RAM disk
- internal flash memory
- external storage medium (if available)

At those storage locations, files can be saved, renamed or deleted. Access is via a web browser and the integrated file manager or via an FTP client.

The FTP server is multisession capable.

⁹² FTP = File Transfer Protocol

Before you begin

- The machine is connected to a network
- The machine has a valid IP address (assigned by the network administrator or a DHCP server)

! The IP address is displayed on the operation panel when the machine starts up. Alternatively: Call parameter Interface > Network > IP address.

- The FTP server on the machine is enabled (Interface > Network > Services > FTP server = "On")
- Host computer with an FTP client installed on it (under Windows e.g. Windows Explorer or **FileZilla**, under Linux e.g. Midnight Commander or FileZilla)
- The FTP connection is not blocked by a firewall

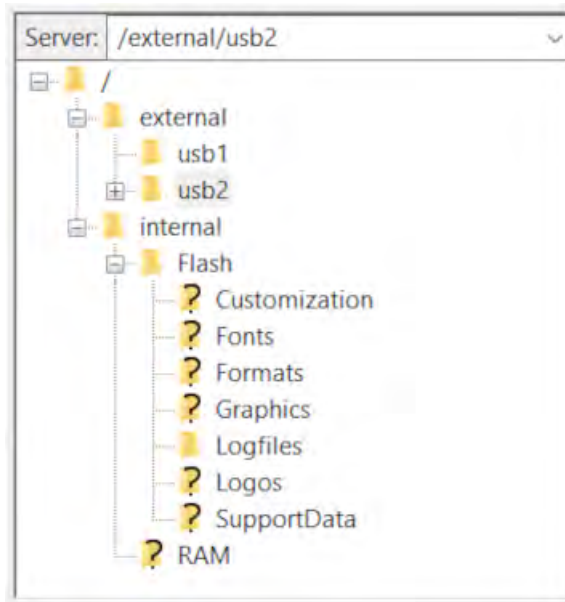
Procedure

1. Start the FTP client.
2. Enter the IP address of the machine in the appropriate field of the FTP client.
3. Enter the user name and password in the appropriate fields of the FTP Client.

! User Name: One of the "Operator", "Supervisor", or "Service" roles; Password: Numeric string of the corresponding key code, such as 1132 for Operator. The Operator role is read-only.

Results

The directory structure of the data storage is displayed in the FTP Client:

**Copy data into the internal Flash memory**

Describes how to copy directories from an external flash memory to the internal flash memory.

Before you begin

External flash memory (USB thumb drive) with directories on it, which are to be copied into the internal flash memory.

! Only the following NOVEXX standard folders can be copied:

- Fonts
- Formats
- Logos
- Graphics
- Customization

If an attempt is made to copy another directory, a message briefly appears stating that copying this directory is not permitted.

Procedure

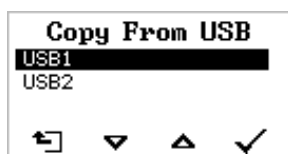
1. Connect the USB stick to one of the USB interfaces.
2. Call Tools > Internal Flash > Copy From USB.

! The USB thumb drive is recognized automatically. The parameter Copy From USB appears only after the USB thumb drive has been plugged in and recognized.

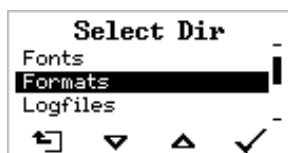


3. Select USB interface:

! If only one USB interface is occupied by a USB thumb drive, only this interface is displayed (USB1).



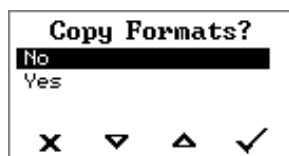
4. Select one of the listed directories in the Select Dir dialog.



! With the command Copy All (at the end of the folder list) all permitted NOVEXX standard folders can be copied at once. If the AUTOSTRT.FOR file is located in the root directory, it is also copied.

- Confirm selection with "Yes".

! Here the directory "Formats" was selected.



Results

The display "Copy in progress . . ." appears while the directory is being copied.

Erase data in internal flash memory

Describes how to delete single or all directories in the internal flash memory.

Procedure

- Call Tools > Internal Flash > Delete Dir.
- Select directory to be deleted:

! In the figure, the directory "Formats" is selected; to delete all directories, select "Delete All".
The "Logfiles" and "SupportData" directories can only be deleted with "Service" access rights.



- Confirm deletion with "Yes":



The deletion process is executed.

DATA TRANSMISSION WITH ETHERNET

CAUTION!

Unqualified manipulations of a data network can disturb or stop its proper functioning. Connecting a device to a network requires network administrator knowledge!

► Consult your network administrator for assistance, if you don't have knowledge on this level!

Integration of Ethernet Interface

The Ethernet interface of the machine is layed out as 10/100/1000 Base T. The transmission speed is set by autonegotiation. Two LEDs are located at the RJ45 plug, showing the transmission rate.

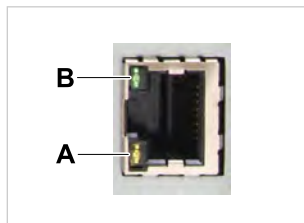


Fig. 48: Yellow (A) and green (B) LED at the Ethernet interface.

MAC Address

An internationally unique MAC (Media Access Control) address is required for Ethernet operation. It consists of 6 bytes and is usually separated by colons or hyphens (hexadecimal, e.g. 00.55.DA:02:00:49 or 00.55.DA-02-00-49). The first 3 bytes are constant 00.55.DA (Novexx code), the last 3 bytes vary for each device. The product manufacturer is responsible for the allocation of the MAC addresses.

IP Address

In the printer software a TCP/IP protocol stack is implemented, i.e. for network purposes the device requires an IP address along with the MAC address. IP addresses are always displayed as 4 bytes separated by dots (e.g. 192.168.1.99). IP addresses are assigned by the network operator, as a rule the network administrator.

! MAC and IP addresses originate from different protocol layers and are generally independent of each other.

Further information about TCP/IP can be found in the abundance of literature on the subject.

Client-ID

By default, the client ID of the CPU board has a Linux-typical value. If this causes problems with network integration, the client ID can be changed to the MAC address of the CPU board by executing "Clear parameters".

CAUTION! - Save the machine settings in a setup file beforehand (see chapter **Save all machine settings** on page 177) and install them again afterwards.

Setting the IP Parameters

The IP-parameter settings can either be set fix, or they can be requested from a DHCP server with every start of the printer. To assist the system administrator, the DHCP server is provided a host name on request, which is structured as follows: nx-mmmmmm (mmmmmm = The last 3 bytes of the MAC address). The following values have been preset:

- IP address: 192.168.0.99
- Net mask: 255.255.255.0
- Default gateway: 0.0.0.0

Menu	Parameter	Description
Interface > Network	IP Addressassign	Here, please set "Fixed IP address" or "DHCP".

Menu	Parameter	Description
	IP address Net mask Gateway address	IP parameter input fields, in case "Fixed IP address" was set for the address assign type.

Table 29: Setting the IP parameters in the printer menu.



Connection to a name server is not required.

CAUTION: The address allocation for each device must be clear and unambiguous. Ask your network administrator for assistance!!

Transmission with Raw Socket Interface

Printing data can be transmitted using a parameterisable socket interface (TCP server socket on port number > 1024).

This protocol is supported by

- all Unix derivatives; a connection similar to that of terminal servers can be established.
- Windows operating systems (Windows 2000 or higher)

Parameter	Description
Interface > Network > Port address	Here you can select the port number of the service in section 1024-65535
Interface > Print interface	"TCP/IP SOCKET" must be set in order to receive printing data at the set port number.

Table 30: Settings for sending via raw socket interface.

Transmission with LPD Server

Printing data can be transmitted to the printer using the LPR/LPD (Line Printer Daemon) protocol ("BSD Spooler").

This protocol is supported by

- all Unix derivatives
- all Windows operating systems



The print queue of the host must be named "lp".

Example

1. Set parameter Interface > Print interface to "LPD server".
2. Send the print job file (here: "test.txt") as illustrated using the "lpr" command (see fig. below).

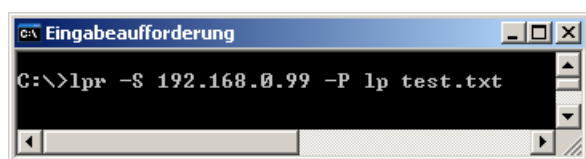


Fig. 49: Sending a print job with the "lpr" command.



Enter "lpr ?" to get a list of the admissible command options.

Troubleshooting

The following should be checked if a problem occurs:

- *Ethernet connection*: The yellow LED belonging to the printer network socket must be illuminated. If this is not the case, possible sources of error are:
 - that the network is not connected to the outlet.
 - ISDN outlet: Erroneous, the network cable was connected to an ISDN instead of a network outlet. Both outlet types do not differ mechanically.
 - an incorrect cable (ISDN cable?) is used to connect the printer to the network outlet.
 - a defective hub/switch.
 - a defective printer board.
- *IP parameter*: The defined parameters or parameters set via DHCP are displayed in the “Printer Status” printout. A “ping” to the set IP address must return an echo. This also works if a different interface is set in the Easy Plug Interpreter parameter. Possible source of error: Incorrect configuration of a network participant.
- *On the printer*, either “TCP/IP SOCKET” or “LPD server” must be set in parameter Interface > Print interface.

SAVE/APPLY MACHINE SETTINGS

Sometimes, it will be necessary to reinstall all parameter settings of a machine at a time or to transfer the settings to another machine. In those cases, the operator can save time, money and nerves by loading all the parameter settings completely. The following cases are possible:

- After a machine is being serviced, it is supposed to get the same settings as before.
- The parameter settings of one machine are supposed to be transferred to another machine of the same type.
- Several machines of the same type should be provided with the same settings.

It is advisable to read out and to store the parameter settings completely, to be able to restore them later. To do so, there are two ways:

- Reading out via the *interface* by means of appropriate Easy Plug commands. This requires sound knowledge of the command language Easy Plug and is not further discussed here.

! Further information: refer to the Easy Plug manual, topic section „Description of Commands“, commands #!PG and #PC.

- Storing the parameter settings in a text file („setup file“) (see description below).

Save all machine settings

Describes how to save the parameter settings in a text file („setup file“).

The setup file can be saved either via the operation panel or via the web panel .

Possible storage locations:

- *Operation panel: Internal flash memory or external (flash) storage medium (directory \FORMATS)*
- *Web panel: All memory accessible to the display device*

! Preset naming of the file according to the following pattern:

- SETUPALL_XDM_944_LH_123456.FOR for storage option “With adjust para” (Example file see appendix)
- SETUP_XDM_944_LH_123456.FOR for storage option “Without adj. par”

123456 = Serial number of the machine

Procedure

1. (Optional) Plug in an external storage medium.
2. Switch on the machine.

Saving via the operation panel:

3. Call parameter Tools > Diagnostic > Store Parameters.
4. Select and confirm the storage medium.

! If no external storage medium is connected, only Internal Flash can be selected.

5. Select storage option: “With adjust para” or “Without adj. par” (for details refer to **Store Parameters** on page 97).
The default file name is displayed.

6. Accept the preset file name (key ) or change the file name (key ) and then accept.

! If a file with the specified name already exists, it will be overwritten without prior request.

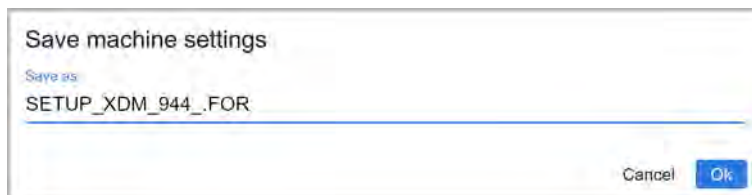
(Alternative) Saving via the web panel:

7. In the web panel, call up the “Administration” view.
8. Click on “Save machine settings” or on “Save all machine settings”:



- Save machine settings: Parameters, which contain device specific settings, are *not* saved. Application example: Transfer of printer settings to another printer (device specific settings as print head resistance or sensor settings should not be overwritten).
- Save all machine settings: Parameters, which contain device specific settings, are *also* saved. Application example: Service.

The default file name is displayed:



9. (Optional) Change the file name.
10. Click “Ok” to save.
The “Save file” dialog of the display device opens.
11. Select and confirm the storage location.



Only a location can be selected that is accessible by the display device in use.

Related tasks

Data input at the operation panel on page 26

Describes in general terms the input of data at the control panel, which may be required in various environments.

Related reference

“Administration” view on page 37

Apply machine settings

Files with parameter settings (setup files) must meet the following conditions in order to be read in :

- File extension: *.FOR
- Setup file must match the machine (The default file name contains the machine type, e. g. SET-UP_XPA934(...))

The import of the setup file can be started via the control panel of the machine or via the web panel.

CAUTION!

There is a danger that the machine doesn't start, after a setup file has been read that doesn't match the machine type.

► Never load the setup file of another machine type



Fig. 50: Warning, if a wrong setup file was selected. The first line contains a scrolling text which shows a warning and afterwards the relevant file name. The answer in most cases should be "No".

Procedure

Operation panel (standalone mode):

1. (Optional) Insert external storage medium with the setup file on it.

! The setup file must be located in the directory \FORMATS.
Alternatively, the setup file can be loaded from the machine's internal flash memory.

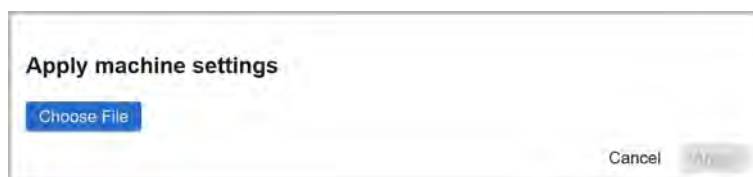
2. Switch on the machine.
3. Switch to standalone mode.
4. Select and confirm the type of storage medium.

! If no external storage medium is connected, only Internal Flash can be selected.

5. Select and start the setup file.
The parameter settings are loaded. The machine is then restarted.

(Alternatively) Web panel:

6. Access the "Administration" view in the web panel.
7. Click "Apply machine settings":



8. Click "Choose File".
The file selection dialog of the display device opens.

9. Select and open the setup file.
10. Click “Apply”.
The parameter settings are loaded. Afterwards, the machine is restarted.

(Alternatively) Automatic setup:

11. Save the setup file as `AUTOSETUP.FOR` in the root directory of the external storage medium.
12. Plug in the external storage medium.
13. Switch on the machine.
The reading of the parameter settings starts automatically.

Related tasks

Selecting Files from an External Memory Medium on page 162

Related reference

“Administration” view on page 37

RESET MACHINE SETTINGS

Restore factory settings

Resets all parameter settings that are not machine-specific to their factory default settings.

Procedure

Set parameter System > Factory settings to “Factory defaults”.

i Optionally, customer-specific values can also be restored if they were previously saved using System > Custom defaults = “Apply current”.

Results

The machine is reset to factory settings and restarted.

Clear parameters

About this task

If the machine is so badly set that it no longer starts up properly, it may be useful to delete all parameter settings:

CAUTION!

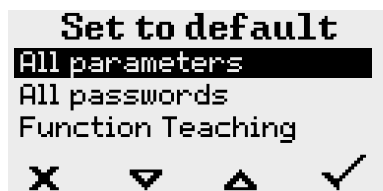
Loss of machine settings!

In contrast to the factory setting, which resets to default settings, all parameter settings - including machine-specific ones such as sensor settings - are deleted here.

► Use only in an emergency!

Procedure

1. Trigger restart of the machine (switch off/on or warm start).
2. While the machine is starting up, keep keys 1 + 4 pressed until the following selection window appears:



3. Select "All parameters" and acknowledge by pressing key 4. A window for requesting a key code appears.
4. Enter key sequence 4-2-1-2.

Results

The parameter settings are deleted and the machine restarts.

! Patience! - The process takes approx. 25 seconds.

What to do next

If available, import the machine settings from a setup file. Alternatively, make the settings manually.

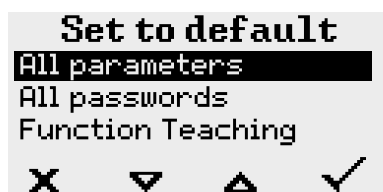
Reset key codes

About this task

Resetting the key codes becomes necessary if the key code for the service role can no longer be remembered.

Procedure

1. Trigger restart of the machine (switch off/on or warm start).
2. While the machine is starting up, keep keys 1 + 4 pressed until the following selection window appears:



3. Select "All passwords" and acknowledge by pressing key 4. A window for requesting a key code appears.
4. Enter key sequence 2-1-2-4.

Results

All passwords are reset to factory defaults and the machine restarts.

Machine start without motion control

About this task

If error conditions occur before reaching operational readiness that cannot be eliminated, this measure should be carried out first. Such endless loops of error messages are often triggered by incorrect or contradictory settings of individual parameters.

Procedure

1. Trigger restart of the machine (switch of/on or warm start).
2. While the machine is starting up, keep keys 1 + 3 + 4 pressed until the following error message appears:

```
Status num: 6007  
Print ctrl. stop
```

! "Print ctrl. stop" tells that the motor and sensor control is deactivated.
3. Acknowledge the error message and wait until **Ready** is displayed.
4. In the parameter menu, change the setting that causes the error.
5. (Optional) If the setting that causes the error is not known: Set the machine to factory default settings: System > Factory settings = "Factory defaults".

! The machine-specific settings are retained.
6. Trigger restart of the machine (switch of/on or warm start).

(Newly) assigning board addresses

About this task

If a board type is retrofitted several times in a machine, one board (for 2 new ones) or two boards (for 3 new ones) must be manually assigned its address on the CAN bus. This is normally done during production. If the boards are retrofitted (e.g. two 8IO boards), the assignment is automatically queried after the first machine start. Alternatively, the assignment can be queried later, e.g. to change it.

! If only one board of an existing type is retrofitted, the address is assigned automatically.

In the following, the procedure is shown using the example of two retrofitted 8IO boards.



WARNING!

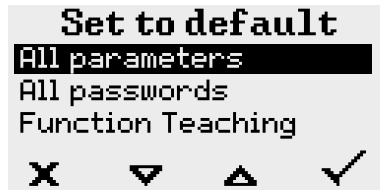
The procedure described below must be carried out with the housing open, otherwise the flashing signals on the circuit boards cannot be seen. Danger from electric shock (mains voltage at the input of the power supply) and from burns (possible high temperature of the motors).

- The described adjustment may only be carried out by authorized specialists who are aware of the risks involved!
- Avoid reaching into the housing!

Procedure

Steps 1-4 are only necessary for subsequent reallocation. Normally the procedure starts with step 5 after the first power on:

1. Open the rear hood.
2. (Optional) Trigger restart of the machine (switch off/on or warm start).
3. (Optional) While the machine is starting up, keep keys 1 + 4 pressed until the following selection window appears:



4. (Optional) Select "Function Teaching" and confirm with key 4

! "Function Teaching" only appears if there are at least two boards of the same type for which no CAN addresses are stored (in the example, the subsequently installed 8IO boards)

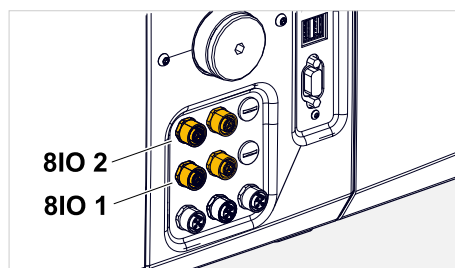
A window for requesting a key-code appears.

5. (Optional) Enter key sequence 1-2-4-2.
The machine restarts. After that the blue LED on one of the boards of that type (in the example: 8IO) starts flashing very fast. The following selection window appears:



! The title bar of the window indicates the type of board to which an address is currently assigned (IOEX = internal designation for 8IO, see Info > System > 8IO 1 > Module type). The number in brackets is the MAC address of the board in question (see Info > System > 8IO 1 > CAN MAC address), which is currently flashing rapidly.

6. Select "Extended IO 1" (picture below: 8IO 1) or "Extended IO 2" (picture below: 8IO 2) depending on where the fast-blinking board is installed and confirm with key 4.



! The assignment must be carried out in the order shown.

7. Close the rear hood again.

Results

This completes the assignment. The second board is assigned automatically. After the assignment a restart is performed.

! If there are 3 boards of the same type, the third board is automatically assigned.

ACCESS TO THE WEB PANEL VIA WI-FI

Before you begin



Fig. 51: Wi-Fi USB dongle "LM-Technologies LM842" (is supported with firmware version 1.01 or higher; article number N102398)

About this task

In some cases it is not possible to access the web panel through the network to which the machine is connected. For external service technicians this should be the rule. However, the web panel can still be used with a mobile device via a Wi-Fi connection if this is established with the help of the Wi-Fi USB dongle mentioned above.

Procedure

1. Switch off the machine.
2. Connect the Wi-Fi dongle.
3. Switch on the machine.
4. Make the following parameter settings on the machine:
 - a) Interface > Network > IP Address assign = "Fixed IP address"
 - b) Interface > Network > IP address = "192.168.233.1"

! Or another address from the subnet 192.168.233.0/24
 - c) Interface > Network > Services > Wi-Fi = "Wi-Fi direct".

5. Activate Wi-Fi on the mobile device.

6. Display available networks.

! The machine uses the Wi-Fi dongle to build a separate small network, independent of the (company) network to which the machine is connected. The Wi-Fi signal appears under the name stored in the parameter Interface > Network > DHCP host name. ATTENTION! - If no name is entered there, the signal does *not* appear under "Available networks".

7. Select the Wi-Fi signal of the machine.
8. Enter the IP address specified in step 4b in the web browser on the mobile device.

Results

The web panel user interface appears on the mobile device.

Related concepts

Web panel - what's that? on page 28

PRINTING WITH TEMPERATURE COMPENSATION

Description of function

As the machine processes a larger print job, the print head temperature - and therefore the print contrast - increases during printing. This is all the stronger the larger the print job and the higher the black content of the print image.

In extreme cases, this rise in temperature can lead to smearing in fine structures when printed, e.g. barcodes arranged crosswise to the printing direction. To avoid this, the firmware constantly checks and corrects the print head temperature. The precondition for this is that the parameter System > Print Control > Temp. reduction is set to a value > 0 (Default: 20%). The higher the parameter value is set, the stronger the temperature compensation.

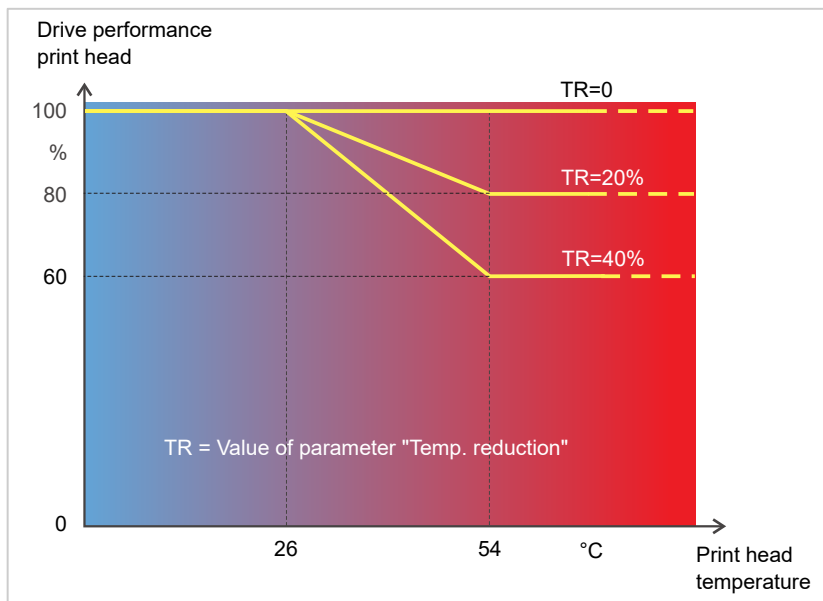


Fig. 52: With the parameter System > Print Control > Temp. reduction activated, the driving power of the print head – and therefore indirectly the print contrast – are reduced. Reduction starts at a temperature of 26°C. The maximum value is maintained at 54°C and above.

Readout example

The printing layout contains a lot of black areas. For this reason, the temperature reduction is activated with 40%.

► System > Print Control > Temp. reduction = 40%

Now, if the print head temperature rises above 26°C, the driving power will be reduced automatically.

Reading out the diagram results in: With a given print head temperature of approx. 40 °C, the driving power is reduced to approx. 80%; with a supposed print head temperature of 54 °C or above, it is reduced to 60%.

ACTIVATE SERVICE MODE

About this task

Service technicians need access rights to all parameters of the menu. For this purpose, there is the possibility of forcing a code request and entering the service mode after entering the service key code, regardless of the setting of the Access authoriz. parameter.

Procedure

Code request after restart:

1. Trigger restart of the machine (switch off/on or warm start).
2. During the restart, keep keys 3+4 pressed until the prompt "Enter Access Code!".
3. Enter key code for service mode: 1-2-3-1-2-2-2

Code request during operation:

4. Switch to "Home" display.
5. Press keys 1+3+4 simultaneously.
The prompt "Enter Access Code!" appears.
6. Enter key code for service mode: 1-2-3-1-2-2-2

USE THE MACHINE AS A DISPENSER

The XDM 94x can also be operated as a pure dispenser, i.e. without print function.

Procedure

Switch on dispenser operation:

1. Set the label pitch of the material used.
2. (Optional) *Without* ribbon: Set Print > Material > Label > Print method = "Thermal printing" (otherwise error "5302 Ribbon movement").
3. (Optional) *With* ribbon: Set Print > Material > Label > Print method = "Thermal printing" or "Thermo transfer".

4. Set Dispenser > Dispense Mode = "Dispense only".
The machine restarts and this display appears:



The machine is now waiting for a start signal or for a key press on key 1.

Switch off dispenser operation:

5. Press key 4.
The machine switches to the pause mode:



6. Press key 1 to switch to "Home" view.
7. Press key 4 to enter the parameter menu.
8. Set Dispenser > Dispense Mode to one of the print-dispense modes.

APSF

System requirements and Activation

System requirements

- Firmware: BEL-V6.0 or higher
- APSF board installed
- Encoder signal from the conveyor belt available

 APSF cannot be used in conjunction with RFID.

Activation

- Options > APSF > Speed Adaption = "On"

Principle of operation

The automatic dispensing speed adjustment makes it possible to automatically adapt the dispensing speed to the speed of the conveyor belt.

The conveyor belt and the label feed operate in perfect synchronisation thanks to the automatic speed adjustment. If the conveyor belt stops while a label is being dispensed, the label feed will also stop. If the conveyor belt starts up, the label feed will be activated automatically.

The speed of the conveyor belt is picked up by a rotary encoder (A) and transmitted to the control system of the machine. The rotary encoder is not included in the scope of delivery of the machine.

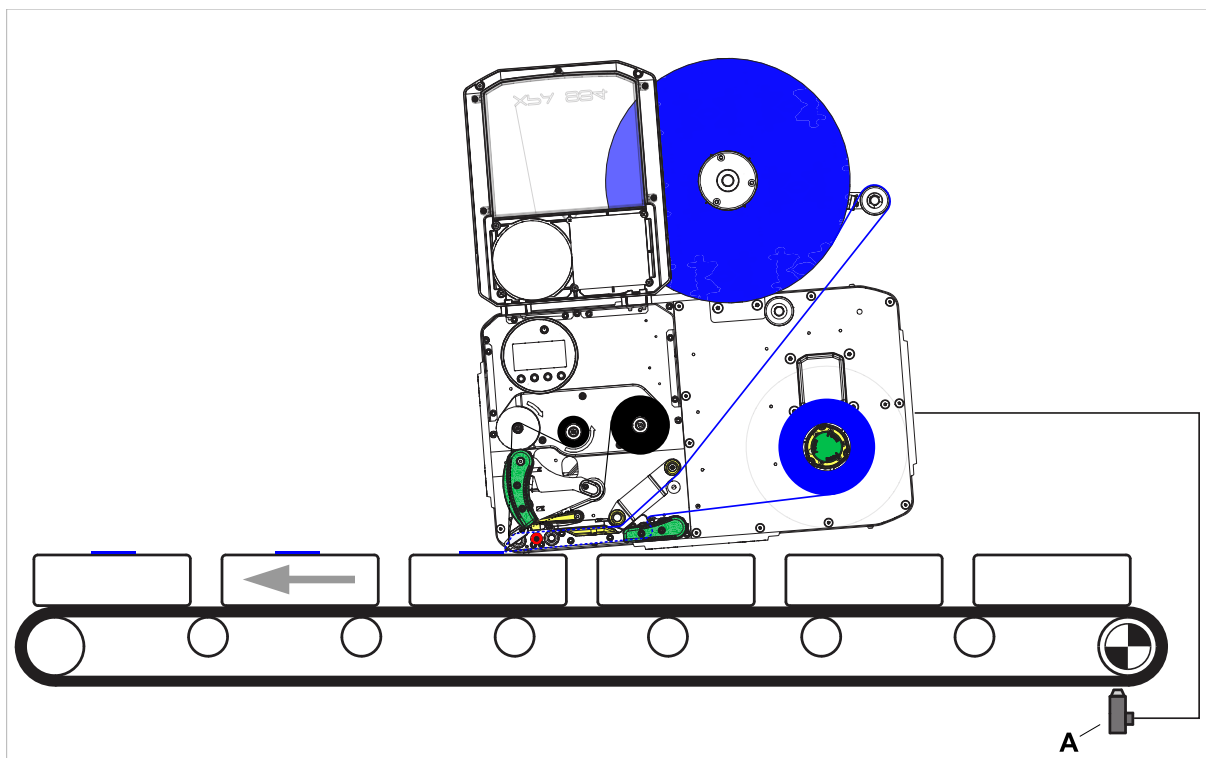


Fig. 53: Rotary encoder (A) on the conveyor line (schematic).



Fig. 54: The conveyor speed is displayed on the operating panel in APSF mode (with the unit set in the System > Speed unit parameter)

Rotary encoder

For the machine to be used with automatic speed adjustment, a rotary encoder must be connected. The rotary encoder communicates the conveyor belt speed to the machine.

Specifications for suitable rotary encoders

Sensor types	Push-Pull or PNP (Recommended: Push-Pull)
Nominal voltage	24 V (DC)
Output current	20 mA for each connected machine
Resolution	approx. 0.4 mm/Puls
Rise time	1 μ s

Decay time	1 μ s
Frequency	max. 20 kHz (Push-Pull) max. 5 kHz (PNP)
Pulse/pause ratio	1/1 $\pm$ 12.5%

! Note about encoder resolution:

The minimum resolution is 5 pulses per millimetre of product movement with a maximum of 32767 steps from detection of the start pulse to dispensing of the label = 0.2 mm resolution.

So between 5 and 20 pulses per millimetre of product movement are ideal.

Novexx rotary encoder

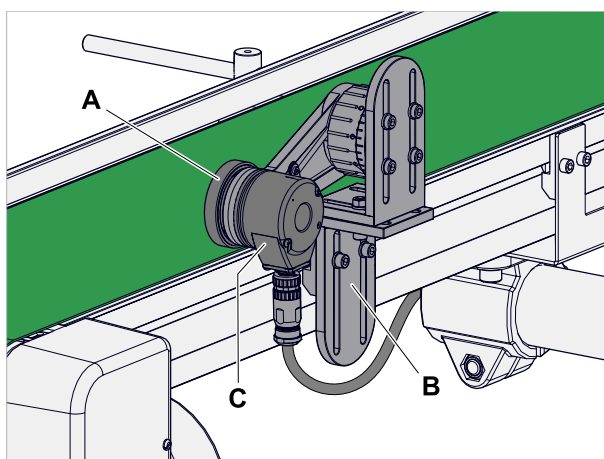


Fig. 55: Novexx encoder (C) with measuring wheel (A) and bracket (B) for mounting on a Novexx Solutions conveyor belt.

Article no.	Image	Article
N103708		Rotary encoder basic kit
N103707		Mounting kit
N103709		Rotary encoder kit

Article no.	Image	Article
N103696		Rotary encoder
N103697		Measuring wheel (200 mm circumference, for 10 mm axle)
N101830		Connection cable 8-Pin M12 to 8-Pin M12, 2 m long

Table 31: Article numbers for Novexx rotary encoder and accessories.

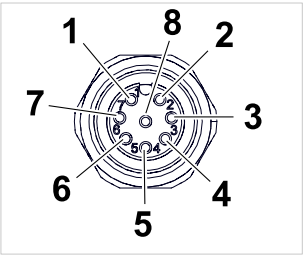
Connecting the rotary encoder

CAUTION!

To avoid damage to the electronics:

- Switch the machine off before connecting the rotary encoder!

Connecting a 8-pole M12 connector:

Pin	Common wire colours	Function	Pinout
1	blue	GND	
2	brown	+24 V	
3	black	Impulse A	
4	--	--	
5	white	Impulse B	
6	--	--	
7	--	--	
8	--	--	

Mounting the rotary encoder

Rotary encoder with measuring wheel at the conveyor belt

A measuring wheel translates the conveyor belt movement into rotation of the rotary encoder shaft. Diameter of the measuring wheel (D) and resolution (impulses per rotation) of the rotary encoder can be entered directly in the function menu.

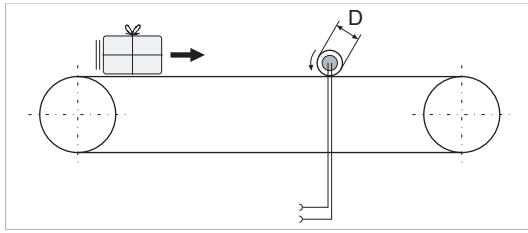


Fig. 56: Mounting the rotary encoder with measurement wheel at the conveyor belt. D = Diameter of the measurement wheel.

Rotary encoder on the drive axle of the conveyor belt

With this mounting option, the rotary encoder is mounted directly onto the drive axle of the conveyor. In this case, the driving gear of the conveyor belt takes the part of the measuring wheel. Accordingly, the diameter of the driving gear (D) must be entered into parameter Options > APSF > Encoder Diameter.

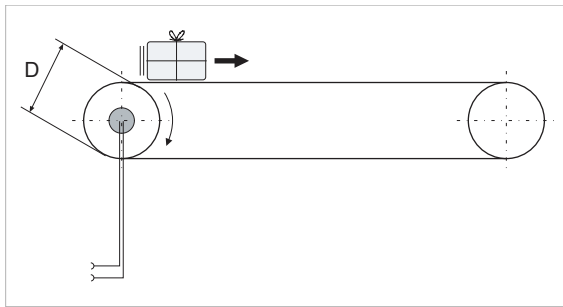


Fig. 57: Mounting the rotary encoder onto the driving axle of the conveyor belt. D = Diameter of the driving gear.

Rotary encoder at the motor axle

The rotary encoder is mounted onto the motor axle. The rotation speed of the motor is normally transmitted via a reduction gear to the driving axle of the conveyor belt.

The reduction ratio of the gear (motor axle rotates faster than drive axle) must be considered, when entering the rotary encoder data. This can be done on two ways:

- Entering a reduced measuring wheel diameter D' regarding the following:

$$D' = \frac{D}{G} = \frac{D \cdot Z_1}{Z_2}, \text{ with Reduction gear ration } G = \frac{Z_2}{Z_1}$$

- Entering an increased resolution I' , regarding the following:

$$I' = I \cdot G = I \cdot \frac{Z_2}{Z_1}$$

! Mind the setting range of the parameters "Diameter" and "Resolution"!

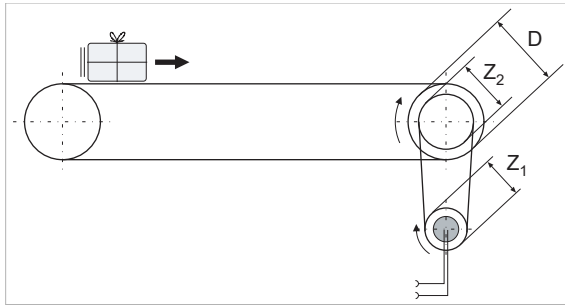


Fig. 58: Mounting the rotary encoder on the motor axle.

Parameter settings for the rotary encoder

Resolution of the rotary encoder

► Enter the resolution of the rotary encoder to be used in parameter Options > APSF > Encoder Resol..

! Take into account the gear ratio, if available.

Diameter of the measuring wheel

The measuring wheel (A) translates the conveyor belt movement into rotation of the rotary encoder shaft (B). The diameter of the measuring wheel therefore influences the rotational speed of the rotary encoder.

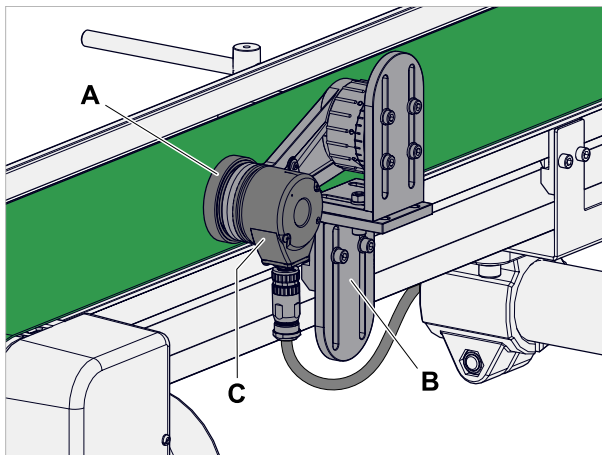


Fig. 59: Rotary encoder kit N103709: A: Measuring wheel, B: Bracket, C: Rotary encoder

► Enter the diameter of the measuring wheel to be used in parameter Options > APSF > Encoder Diameter.

Rotary encoder type

Depending on the features of rotary encoder and labeler, there are different ways to count the impulses generated by the rotary encoder:

- *Single-phase operation*

Only one phase of the encoder signal (signal A) is utilized.

Advantage:	Disadvantages:
– Less expense (as with double-phase)	– Lower resolution (as with double-phase) – If the conveyor is standing still, vibrations can produce “faulty” signals, which the labeler cannot distinguish from “real” signals

- *Double-phase normal operation*

Many rotary encoder produce a second signal (signal B), which is out of phase by 90°. Using this signal can overcome the restrictions of single-phase operation.

Advantages:	Disadvantages:
– Detection of the rotational direction, even when standing still – Double resolution	– Higher expenses (the sensor must be able to produce signal B, the labeler must be able to utilize it) – The rotational direction must be configured

- *Double-phase inverted operation*

If the phase relationship (leading or trailing) between the sensor signals A and B doesn't match the counting direction of the labeler, the labeler calculates nonsense speed values. The following measures correct this problem:

- Operating the rotary encoder in opposite direction (e. g. by mounting it on the opposite side of the conveyor)
- Changing the cables, that is exchanging A and B
- Connecting the inverse signal /B instead of B
- Configuring the inversion of signal B at the machine:
 - Options > APSF > Encoder Type = “2 Phases invert.”

PDF DIRECT PRINTING

The PDF direct print function is based on PDFium, a PDF renderer that is also used in Google's Chromium browser. PDFium renders the PDF information into a bitmap that can be rotated and scaled.

 The PDF file can only be sent to the printer via one of the standard data interfaces. Loading a PDF file in standalone mode is not possible.

Activating PDF direct printing:

- Printer Language > Print Interpret. = “PDF Direct”

The Printer Language > PDF Setting submenu then appears with the PDF-related parameters.

Disturbances

DISPLAY OF STATUS MESSAGES

During operation, tests are continually carried out to determine whether a malfunction has occurred. If a malfunction is detected, the corresponding status report appears on the display.

The status report shown on the display is structured as follows:

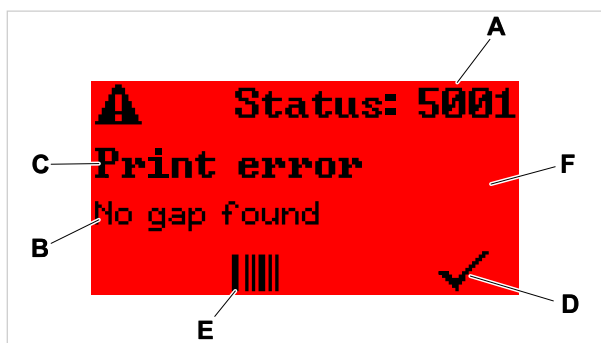


Fig. 60: Example of a status message

A	Status number The status number can be used to find a description of the error that occurred in the chapter Reference of status reports on page 199: In the example it is the message 5001 No gap found on page 222.
B	Status text Each status number has a status text in the language of the control panel.
C	Category Possible categories include among others “print error” and “format error”.
D	Check mark icon Press the key below the symbol to confirm the status message. If this symbol is missing, the machine must be restarted.
E	Bar code icon After pressing the key below the symbol, a QR code is displayed that refers to a quick troubleshooting guide (see chapter Access troubleshooting instructions with your smartphone on page 198).
F	Background color Possible background colors are: Red (error) and yellow (warning)

i The status can also be queried over the serial interface (see Easy Plug command #!Xn).

TYPES OF STATUS MESSAGES

Error messages

Error messages must be acknowledged by the operator as the triggering event or fault endangers normal operation.

Blocking error messages are messages that occur as a result of serious errors. The message cannot simply be acknowledged by tapping on "Acknowledge". The error state can only be terminated by a "restart" (press keys 1+2+3) or by switching off the printer.

Warnings

Background color = yellow

Warnings inform the operator about the occurrence of a certain event at the printer. The message is only displayed for a short time. The printer continues operating without intervention from the user.



Fig. 61: Example of a warning

There are also warnings that appear as an additional line of text on the display "Ready" (picture).



Fig. 62: Example of an USI warning: "Productstartwarn" (The XPM 94x doesn't show the  icon).

Warning text	Cause
Print ctrl. stop	<i>Druckersteuerung</i> ist gestoppt. Der Drucker funktioniert nicht richtig.
Print ctrl. limited operation	Die Funktion der <i>Druckersteuerung</i> ist eingeschränkt. Eine Fehlermeldung für einen Teil der Druckersteuerung wurde 3mal bestätigt, ohne den Fehler zu beheben. In Frage kommen die Steuerungsteile für Druckkopf, Messer, Materialaufwickler oder Folien-transport (jeweils falls vorhanden).
Productstartwarn	A new start signal has arrived during the previous print-dispensing process
APSF speed warn.	Die Geschwindigkeit des Transportbandes übersteigt die maximale Druckgeschwindigkeit.
Initializing...	Indicates an ongoing initialization process (e.g. of the backing paper rewinder) Also refer to error 9036 Initializing... on page 245

Table 32: Warnings with an additional line of text in the display "Ready".

If several warnings occur simultaneously, they are saved in a queue.

Acknowledging warnings in the display "Ready":

► Press keys 2+3.

Special case *ribbon warning*: No text is displayed, but the ribbon symbol flashes.



Fig. 63: Ribbon warning during a print job: The background is yellow, the ribbon icon flashes.

For further information refer to chapter *Operation > Setting and Monitoring > Monitoring functions > Ribbon reserve*.

USI status messages

These status messages are triggered by the signal interface. They provide information on whether certain signals are present.



Fig. 64: Example of a USI status message (The XPM 94x doesn't show the  icon).

Status message	Cause
USI pause	Signal <code>usi.pause</code> is active
USI feed	Signal <code>usi.feed</code> is active

Table 33: These USI status messages may occur.

USI status messages are only shown in the "Ready" display.

USI status messages may occur at the same time as USI status messages (see above). If this happens, warnings are displayed with priority.

General software errors

Errors in the firmware can never be completely ruled out. Such errors are described in the error directory as "General software errors". They can only be corrected by the manufacturer.

► Switch the printer off and, after 30 seconds, on again. If the fault repeatedly occurs, please contact our technical service.

Easy Plug errors

Errors in the Easy Plug code can be detected much easier with the following setting:

Printer Language > EasyPlug Setting > EasyPlug errors = "Strict handling"

The Easy Plug command, which caused the error, is displayed after approx. 2 seconds in the lower display line. The displayed text is up to 30 characters long and is scrolled automatically.

If a single character caused the error, this character is marked with ">> <<" in the display text, to facilitate the detection.

By pressing the  key, the display can be toggled between error message and Easy Plug command text.

Unspecific errors

Some errors can have more than one cause. To be able to find the specific reason for such an error, it is important that it can be reproduced.

► Send the following items of information as complete as possible to the manufacturer – preferably as files:

- Layout and/or print job, which makes the status message appear
 - Parameter configuration of the printer, when the error occurs
 - Log file of the print job until the error occurs
- Use parameter Tools > Diagnostic > Store Parameters, to save the current parameter configuration.
- Use parameter Tools > Diagnostic > EasyPlug Monitor, to send the received Easy Plug data to a serial interface. Alternatively, with some printer types, log files of the print job can be saved on an external memory medium (Tools > Diagnostic > EasyPl. file log).

Our Technical Support will try hard to find a solution by reproducing the situation which caused the error.

Not listed status reports

Some status reports are not shown in the list of status reports. They provide developers of the printer firmware and trained service personnel with information about special conditions, particularly with regards to the printer firmware.

If your printer displays status reports which are not included in the following list, please refer to the authorised service office. Make a note of the status number and the circumstances in which the message occurred.

ACCESS TROUBLESHOOTING INSTRUCTIONS WITH YOUR SMARTPHONE

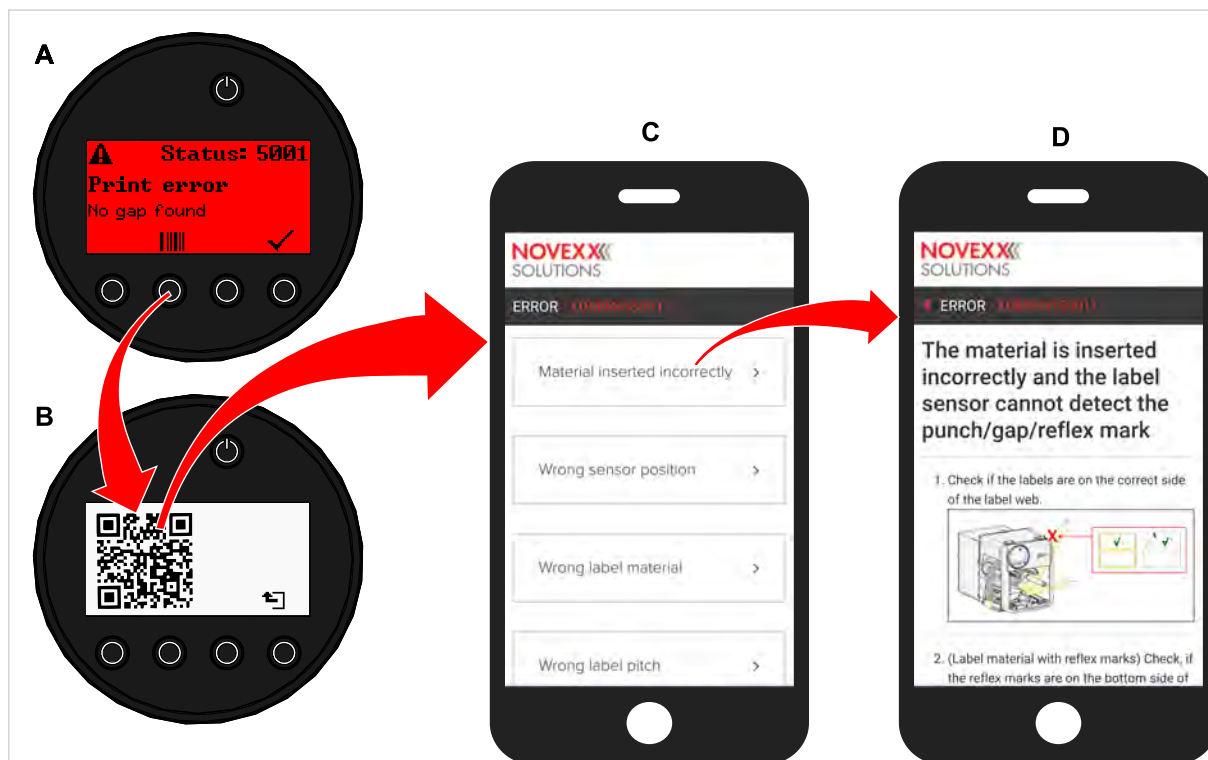


Fig. 65: If the error message has a barcode symbol (A), a QR code (B) can be used to call up troubleshooting instructions (C) on the smartphone.

! This function is currently only available for the most important error messages relevant to the machine operator. Further descriptions will follow with future firmware versions.

Procedure

1. Press the key below the barcode symbol. (A).
A QR code is displayed. (B).
2. Scan the QR code with the smartphone.
A webpage with one or more troubleshooting instructions appears on your phone (C).

! If several error solutions are displayed, they are sorted by relevance, i.e. the solution for the most probable error is at the top.
For the time being, only English texts are displayed. Future firmware versions will also support other languages.

3. Touch one of the fault solutions.
A troubleshooting guide is displayed.

REFERENCE OF STATUS REPORTS

1000 No new command

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1001 Parameter Table

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1002 Comm. sorting

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1003 Too many slashes

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1004 Slash w/o param.

General software error

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **General software errors** on page 196.

1005 2 same commands

General software error

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **General software errors** on page 196.

1006 Letter incorrect

General software error: self-acknowledging

- ▶ Please read the notes in section **General software errors** on page 196.

1007 Command incorr.

Unknown command.

- ▶ Check Easy Plug sequence.

1008 Subcomm. incorr.

Unknown letter in a subcommand.

- ▶ Check Easy Plug sequence.

1009 Param. tab inc.

General software error

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **General software errors** on page 196.

1010 #ER x #Q !

One or more invalid commands between #ER and #Q.

- ▶ Check transmitted Easy Plug sequence.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1011 #ER missing

One or more format commands without leading #ER (self-acknowledging)

- ▶ None. The command is still carried out.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1012 #IM x #Q !

One or more invalid commands between #IM and #Q.

- ▶ Check Easy Plug sequence.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1013 Comm. flag inc.

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1014 Uninit integer

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1015 Uninit float

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1016 Uninit string

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1017 Uninit discr

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1018 Too many discr

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1019 Uninit BCD para.

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please pay attention to the notes in chapter **General software errors** on page 196.

1020 Too much image

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please pay attention to the notes in chapter **General software errors** on page 196.

1021 Uninit image par

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please pay attention to the notes in chapter **General software errors** on page 196.

1022 Too many files

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Pay attention to the notes in section **General software errors** on page 196.

1023 Uninit File Para

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please pay attention to the notes in chapter **General software errors** on page 196.

1024 Com. too long

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please pay attention to the notes in chapter **General software errors** on page 196.

1025 Com twice there

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please pay attention to the notes in chapter **General software errors** on page 196.

1026 Comm. w/o. flag

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1027 Uninit parameter

Parameter could not be initialised.

- ▶ Acknowledge by pressing the  button.

1028 Parameter uninit

General software error

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **General software errors** on page 196.

1029 Param. incorr.

Incorrect parameter in the command.

- ▶ Check Easy Plug sequence.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1030 Command incorr.

Error during the command interpretation.

- ▶ Check Easy Plug sequence.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1031 Too many slashes

Too many parameters between two slashes.

- ▶ Check Easy Plug sequence.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1032 Incorrect char.

Parameter contains an invalid character.

- ▶ Check Easy Plug sequence.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1033 Uninit flash par

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1034 Uninit restrict

A „restricted string“ parameter could not be initialized.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1035 Uninit combi

General software error. A combi parameter could not be initialized.

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **General software errors** on page 196.

1036 Wrong combi para

General software error. A combi parameter could not be initialized.

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **General software errors** on page 196.

1037 Software error

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1038 Software error

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1042 Missing file path:

Wrong file path within an Easy Plug command (#CF, #FO, #SG or #YG).

- ▶ Specifying the correct file path.

1089 Seek Fkt. Error

General software error. An error occurred while processing the function „seek“ in the internal file system of the printer.

- ▶ Acknowledge by pressing the ✓ button.
- ▶ Please read the notes in section **General software errors** on page 196.

1090 Incomplete Job

The actual print job was not terminated by the #Q command. In other words, after a start command #ER for a label format follows another #ER command without the first format being terminated by #Q.

- ▶ Acknowledge by pressing the ✓ button.
- ▶ Terminate the print job with a #Q command.

1091 Wrong var field

An error occurred while interpreting the text string of a variable data field. The error could e.g. be caused by a #YT or a #YB command (Easy Plug). Self-acknowledging error.

- ▶ Check the text strings of variable data fields.

1092 Rename file

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1093 Delete file

File cannot be deleted.

- ▶ Check whether the file name is written correctly; check whether the file is write-protected.

1094 More than 3 figs

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1097 Out of memory

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1099 File end

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1101 Wrong time/date

Easy Plug command #RTC (set realtime clock): unvalid date or wrong date/time format.

- ▶ Check command #RTC in the current printjob.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1102 Counter offset

Applies to all Easy Plug commands with counter function, e. g. #YT: A non-valid digit was used in the offset.

- ▶ Check all commands with counter function in the current printjob.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1110 Opening Bracket

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1111 Closing Bracket

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1112 Para: No Value

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1113 No Default Value

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1114 <Limit value

A sent Easy Plug command contains a value which exceeds the admissible range at the bottom limit. The faulty value is replaced automatically by a default value matching the limits.

Example: #YT109/-1/. The value -1 has been assigned to the parameter d. Admissible for d are the values 0, 1, 2, 3. Therefore, -1 exceeds the value range at the bottom limit.

- ▶ Check the Easy Plug command on admissible values and correct them if necessary.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1115 > Limit value

A sent Easy Plug command contains a value which exceeds the admissible range at the top limit. The faulty value is replaced automatically by a default value matching the limits.

Example: #YT109/5/. The value 5 has been assigned to the parameter d. Admissible for d are the values 0, 1, 2, 3. Therefore, 5 exceeds the value range at the top limit.

- ▶ Check the Easy Plug command on admissible values and correct them if necessary.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1120 Incorr. logo no.

Logo no. is invalid because it is outside of the address field. (self-acknowledging)

- ▶ Check whether the logo no. has been given as being smaller than 0 (zero) or larger than 255.

1121 Logo exists

Logo already exists.

- ▶ Change the designation of the logo; repeat saving.

1122 Creating logo

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1123 Rename logo

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1124 Logo file

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1125 Delete error

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1126 File creation

Faulty Easy Plug code. A file could not be created. The error may e.g. be caused by a faulty filename or by too less printer memory.

- ▶ Check all used filenames for length, applied characters, etc. Change the name if faulty.
- ▶ Check the printer for enough memory.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1127 File format

A file name doesn't match the (DOS-) filename convention.

- ▶ Check all used filenames for length, applied characters, etc. Change the name if faulty.

1128 File exists

Faulty Easy Plug code. A file is ought to be loaded into the printer memory via #DF command. The command was used without adding the parameter "O" for "Overwrite", but a file already exists under the given name.

- ▶ Rename one of both files or set the parameter "O".
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1130 Float overflow

Number of figures is too high for a floating comma variable.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Reduce the number of figures.

1131 Logo cache full

A logo or several logos was/were sent which is/are too huge for the logo buffer.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Reduce the logo size.

1140 Line too long

Error during conversion from EPT into BIN: permitted line length exceeded.

- ▶ Reduce line length.

1141 Para. incorr. BI

Error during processing of a Bit Image parameter.

- ▶ Acknowledge by pressing the  button.

1150 Integer overflow

Too many figures for an integer variable.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Reduce the number of figures.

1160 String too long

A string parameter exceeds the maximum string length of 256 characters (1024 characters in 2-dimensional bar codes respectively).

- ▶ Reduce the number of characters in the string.

1170 X Pos > width

Faulty Easy Plug code. X position exceeds permitted maximum value.

Result The previously set print offset is retained.

- ▶ Reduce value for X position.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1171 X Pos < zero

Faulty Easy Plug code. Value for X position < zero.

Result The previously set print offset is retained.

- ▶ Check value for X position for signs.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1172 Y Pos > length

Faulty Easy Plug code. Y position exceeds the label length.

Result The previously set print offset is retained.

- ▶ Reduce value for Y position.
- ▶ Select a longer label.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1173 Y Pos < zero

Faulty Easy Plug code. Value for Y position < zero.

Result The previously set print offset is retained.

- ▶ Check value for Y position for signs.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1174 Max width: right

Maximum label width, right, reached. Elements such as character, line or logo do not fit into the physical print format (self-acknowledging)

result Only elements which completely fit into the print format are printed.

- ▶ Alter value for width or position of elements.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1175 Max width: left

Faulty Easy Plug code. Maximum label width, left, reached. Elements such as character, line or logo do not fit into the physical print format (self-acknowledging)

result Only elements which completely fit into the print format are printed.

- ▶ Alter value for width or position of elements.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1176 Max length: top

Faulty Easy Plug code. Maximum label length, top, reached.

- ▶ Correct label layout: Position the drawing elements in a way that they fit on the label or modify the label length.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1177 Max length: bot.

Faulty Easy Plug code. Maximum label length, bottom, reached.

- ▶ Correct label layout: Position the drawing elements in a way that they fit on the label.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1178 x Dots < zero

An element of the Easy Plug format is located at an X position < 0.

- ▶ Adjust Easy Plug format.

1200 GetRLE reset st

(number of bytes) * (number of lines) does not correspond to the file length.

- ▶ Switch printer off and then back on again after thirty seconds.

1201 GetRLE error st

GetRLE byte has error status.

- ▶ Switch printer off and then back on again after thirty seconds.

1210 itoa Short Strin

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1240 New FS>E

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1241 New Read Pointer

Faulty memory assignment for print jobs.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1242 New FE in job

Faulty memory assignment for print jobs.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1243 New delete order

Faulty memory assignment for print jobs.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1244 New wrong pos.

Faulty memory assignment for print jobs.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1245 New no space

Faulty memory assignment for print jobs.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1246 New HP no space

Faulty memory assignment for print jobs.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1247 Out of memory

Faulty memory assignment for print jobs.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1260 TimeDate string

General software error

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **General software errors** on page 196.

1270 #-comm. invalid

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1272 Wrong #!..

Faulty Easy Plug code. Faulty use of the immediate command "#!A..". The specified parameter value exceeds the admissible value range (0 to 31).

- ▶ Specify an admissible parameter value.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1273 Wrong #!C..

Faulty Easy Plug code. Faulty use of the immediate command "#!C..". The specified parameter value exceeds the admissible value range (A, F).

- ▶ Specify an admissible parameter value.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1276 #!P wrong number

Faulty Easy Plug code. Faulty use of the immediate command "#!P..". The specified parameter value exceeds the admissible value range (0 to 31).

- ▶ Specify an admissible parameter value.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1277 Wrong #!S..

Faulty Easy Plug code. Faulty use of the immediate command "#!S..". The specified parameter value exceeds the admissible value range (P, R).

- ▶ Specify an admissible parameter value.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1278 Wrong #!X..

Faulty Easy Plug code. Faulty use of the immediate command "#!X..". The specified parameter value exceeds the admissible value range (S, B, P).

- ▶ Specify an admissible parameter value.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1279 #!X wrong number

Faulty Easy Plug code. Faulty use of the immediate command "#!X..". The specified parameter value exceeds the admissible value range.

- ▶ Specify an admissible parameter value.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1282 Spooler FB > L

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1285 #!-comm. incorr.

Faulty Easy Plug code. Faulty use of the immediate command "#!..!". The specified letter is unknown.

- ▶ Specify an admissible letter.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1290 Label limit

Faulty Easy Plug code. Value for x or y position exceeds the label limit.

- ▶ Reduce the value for the x or y position.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1291 Draw field

Faulty Easy Plug code. Function call, drawing object, unsuccessful.

- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1300 Invalid Command

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1301 Table full

General software error

- Please read the notes in section **General software errors** on page 196.

1310 Wrong Field ID

The error can have several causes.

- Please read the notes in section **Unspecific errors** on page 197.

1320 No Default Value

Faulty Easy Plug code.

- Please read the notes in section **Easy Plug errors** on page 196.

1321 Bar Code Object

Faulty Easy Plug code regarding the declaration of a bar code.

- Please read the notes in section **Easy Plug errors** on page 196.

1322 Logo Object

Faulty Easy Plug code regarding the declaration of a logo.

- Please read the notes in section **Easy Plug errors** on page 196.

1323 Line Object

Faulty Easy Plug code regarding the declaration of a line.

- Please read the notes in section **Easy Plug errors** on page 196.

1324 Rectangle Object

Faulty Easy Plug code regarding the declaration of a rectangle.

- Please read the notes in section **Easy Plug errors** on page 196.

1325 Truedoc Object

The error can have several causes.

- Please read the notes in section **Unspecific errors** on page 197.

1326 Fix Field Creati

Faulty Easy Plug code regarding the declaration of a field.

- Please read the notes in section **Easy Plug errors** on page 196.

1327 Update Field Cre

Faulty Easy Plug code regarding the declaration of a field.

- Please read the notes in section **Easy Plug errors** on page 196.

1328 Var Field Crea

Faulty Easy Plug code regarding the declaration of a field.

- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1329 Count Field Crea

Faulty Easy Plug code regarding the declaration of a counting field.

- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1330 Create clk. field

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

1331 Field type inv.

Invalid field type

- ▶ Acknowledge by pressing the  button.

1332 Field length inc.

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1333 Logo not there

Selected logo does not exist.

- ▶ Check file name / existence of the logo.

1334 #YV Data incorr.

Invalid entries for a #YV field (variables data field).

- ▶ Acknowledge by pressing the  button.
- ▶ Correct data.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1335 #YV Field cont.

Content of the #YV field (variables data field) could not be pasted.

- ▶ Acknowledge by pressing the  button.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1336 #YV no. incorr.

#YV field (variables data field) with the given no. not found.

- ▶ Acknowledge by pressing the  button.

- ▶ Check the number of the #YV field.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1390 Web width zero

The printer was set to printing several label rows (Easy Plug command #ER, $n > 1$); but the label width was by fault set to zero ($b = 0$).

- ▶ Correct the #ER command regarding the setting of parameter b.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1391 Web > Width

The printer was set to printing several label rows (Easy Plug command #ER, $n > 1$); but both or one of the parameters n and b are set in a way that $n * b$ (label row width * no. of rows) exceeds the material width.

- ▶ Correct the #ER command regarding the setting of parameters n and b.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1392 Job memory full

The error can have several causes.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1393 Job struct creat

The error can have several causes.

- ▶ Please read the notes in section **Unspecific errors** on page 197.

1394 Invalidation

General software error

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

1395 Label too wide

A printjob contains an #IM-command which sets the label width to a exceeding the maximum print width. The maximum print width depends on the printer type.

- ▶ Refer to the user manual, topic section „Specifications“ for the maximum label width.
- ▶ Reduce the label width set by the #IM-command in the concerned print job, until the label width matches the maximum print width.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1396 Label too long

Label length setting exceeds the maximum label length. The maximum label length depends on the memory configuration of the printer.

- ▶ The info-printout „Memory Status“ shows among other data the maximum label length. Read more about info-printouts in topic section „Info-Printouts and Parameters“.

- ▶ Reduce the label width setting.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1397 Label too short

The label length defined in the #IM command is smaller than the minimum admissible length. The label length is set to the minimum value.

- ▶ Correct the length value in the label layout definition.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1398 Label too small

The label width defined in the #IM command is smaller than the minimum admissible width. The label width is set to the minimum value.

- ▶ Correct the width value in the label layout definition.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1404 UTF8 data wrong

Character code > 0xffff

- ▶ Check/change the character code.

1470 X-Offset

The x-position of a layout element (graphics, text, ...) is beyond the label margin. The element is shifted automatically to the first admissible position at the correct side of the margin.

- ▶ Check the x-positions of the layout elements and change them, if necessary.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1471 Y-Offset

The y-position of a layout element (graphics, text, ...) is beyond the label margin. The element is shifted automatically to the first admissible position at the correct side of the margin.

- ▶ Check the y-positions of the layout elements and change them, if necessary.
- ▶ Please read the notes in section **Easy Plug errors** on page 196.

1501-1535 Messages, which can occur in ZPL emulation mode**1501 Unknown MLI Cmd**

Error level 1

An uninterpretable command was encountered.

- ▶ Check, if the printjob was proceeded correctly. If yes, ignore the message, if no, modify the printjob.

1502 MLI Hash Error

Error level 1

General software error.

- Read chapter **General software errors** on page 196 on page 8.

1503 Filename Too Long

Error level 1

Filename is too long.

- Rename the file with a shorter name.

1504 Param > Max

Error level 1

Parameter exceeds the maximum value defined

- Shorten the parameter.

1505 Param < Min

Error level 1

Parameter is shorter than the admissible minimum value allowed.

- Modify the parameter.

1506 No Previous

Error level 1

Graphics command is to set current row data to previous row data, but previous row data doesn't exist.

►

1507 Not enough data

Error level 1

Data for graphics command is not enough.

- Check and modify graphics data.

1508 String Too Long

Error level 1

String characters exceeds the maximum number of characters which the particular string parameter can take.

- Check and modify the command.

1509 Wrong Byte Cnts

Error level 1

The row size or total size parameters is not valid (equals 0). Occurs when download graphic or download font commands in process.

- Check and modify the command.

1510 Wrong Param

Error level 1

Control characters are not allowed for discrete parameter (single letter parameter).

- Check and modify the command.

1511 Bar Parm Error

Error level 1

Parameters to a barcode command is wrong or does not conform with specs.

- Modify the bar code command.

1512 Code128 Mode Err

Error level 1

Code128 barcode command specifying mode type other than 'AUTO'.

- Modify the bar code command.

1513 Wrong Mode

Error level 2

Coda block barcode command specifying mode type other than 'F'.

- Modify the bar code command.

1514 ^BX Parm Err.

Error level 2

Data Matrix bar code command specified an escape sequence character. This is not supported in this printer.

- Modify the bar code command.

1515 Conv to ECC200

Error level 1

Data Matrix barcode command specified non ECC200 level. Program is attempting to convert to ECC200.

- Modify the bar code command.

1516 Bad Drive: x

Error level 2

The drive selected is not a valid drive. (We support only 'R' and 'B').

- Select a valid drive.

1517 Mask String: x

Error level 2

The mask string used in ^SF command is not supported.

- Modify the print job.

1518 Bad Format: x

Error level 2

The graphic format selected is not supported by Avery ZPL Emulation (Compressed binary and PNG format).

- Convert graphic into a supported format.

1519 Cmd Init Error

Error level 1

General software error.

- Read chapter **General software errors** on page 196 on page 8.

1520 Unsupported Cmd

Error level 1

Non critical commands that is not supported by this printer.

- Check and modify the commands in the printjob.

1521 Unsupported: x

Error level 2

Critical commands that is not supported by this printer.

- Check and modify the commands in the printjob.

1522 Bad Char Set x

Error level 2

The character set selected by ^CI command is not supported.

- Replace the character set by a supported set.

1523 Cmd Parm Error

Error level 1

Error encountered while parsing command parameter.

- Check and modify the commands in the printjob.

1524 d/mm not chg x

Error level 2

Command attempting to lower print density assuming a 200 dpi printer.

- Check and modify the commands in the printjob.

1526 Can't Off CV

Error level 1

Command attempting to turn off barcode validations.

- Check and modify the commands in the printjob.

1527 Offset illegal

Error level 2

RTC command specified a clock offset not supported by this printer (possibly a negative offset).

- Correct the command.

1528 Language illegal

Error level 2

Language specified by RTC command is not English or German.

- Correct the command.

1529 Invalid Prn Mode

Error level 1

Print modes other than cutter mode are selected (Tear-off, Rewind or Peel-off modes in ^MM command).

- Correct the command.

1532 No Fixfont

Error level 2

No fixfonts in Flash.

- Load fixfont.

1533 No Speedo Font

Error level 2

No Speedo font in Flash.

- Load speedo font.

1534 ^XA missing

Error level 1

Command should be placed inside of ^XA...^XZ pair.

- Modify the printjob.

1535 ^XZ missing

Error level 1

Command should be placed outside of ^XA...^XZ pair.

- Modify the printjob.

1561 Wrong Font Format

Format error in a Fixfont file.

- Check font file.

2000-2009 Messages caused by Easy Plug variables**2000 Double var name**

Attempt to define a variable with an already existing name.

- Choose another name for the variable.

2002 Var. data length

The maximum allowed length of a variable was exceeded.

- Correct the variable length.

2003 Expr. bracket

The number of open and close brackets in the expression is not equal.

- Check the brackets in the expression and correct their number.

2004 Exp. quotemark

The number of quotemarks in the expression is not a multiple of two.

- Check the quotemarks in the expression and correct their number.

2005 Exp. comma pos.

Unexpected comma in the expression.

- Check the syntax of the expression regarding commas.

2006 Exp.functionname

A wrong function name is used in the expression.

- Check, if the function names used in the expression are spelled correctly and if the functions exist. Change the function name.

2007 Exp.fct.paratype

A wrong parameter type in an expression was detected.

Example: SubStr("Text",0,"A") would provoke this message, because "A" is not a number.

- Check the expressions. Correct the wrong expression.

2008 Exp.fct.paraCnt

Wrong number of function parameters in the expression.

- Check the expressions. Correct the wrong expression.

2009 Exp. name wrong

A not defined variable name is used in an expression.

- Check the variable names. Correct the spelling if necessary or define a new variable.

2010 Fct. para value

The error is caused by the Easy Plug function chr(). The argument, which was assigned to the function, exceeds the admissible value range 0...255.

- Change the argument (details see Easy Plug manual)

2011 OLV variable

Wrong naming of the variable in Easy Plug command #VDO (details see Easy Plug manual)

- Check the Easy Plug command #VDO in the current printjob.

2111 Invalid Date

Invalid date specification in a string.

Example: Function call DayOfYear(„31“,„6“,„2005“) would produce this error message (because the date did not exist).

- Correct the date specification.
- See Easy Plug Manual, topic section “Description of commands”, chapter “Easy Plug variables”.

2500 Multiple texts

This status number may be combined with variety of texts, which all are generated by the Basic interpreter. The Basic interpreter is a function which is not released nor supported.

- Switch off the Basic interpreter (Printer Language > Print Interpret.).

3000/3003/3006/3012/3015 Com x Overrun

Receive error at the RS232 interface COMx (x = [1...5]).

- Acknowledge by pressing the ✓ button.

3001/3004/3007/3013/3016 Com x Parity

Receive error at the RS232 interface COMx (x = [1...5]).

- Acknowledge by pressing the ✓ button.
- Check parameter setting at printer (Interface > Serial Port 1 > Parity) and PC.

3002/3005/3008/3015/3017 Com x Frame

Receive error at the RS232 interface COMx (x = [1...5]).

- Acknowledge by pressing the ✓ button.
- Check parameter setting at printer (Interface > Serial Port 1 > Baudrate and Interface > Serial Port 1 > Stop Bits) and PC.

3010 Spooler Overflow

Fault which is caused by a faulty handshake at an interface. The consequence is an overflowing data buffer at the printer, because the host doesn't stop to send data to the printer.

- ▶ Acknowledge by pressing the  button.
- ▶ Check the connections of the data line, especially the signal wires belonging to the handshake.
- ▶ Check the interface settings, especially the handshake settings.

3011 Send buffer full

The send buffer is full. This error may happen, if the printer status was requested several times (!Xn), but the status reply was not read out.

- ▶ Make sure that the status reply is read out.

5001 No gap found

No gap found or several blank labels fed.



Illustrated description for troubleshooting:
Click [here](#) or scan the QR code:



The error can have several causes:

Cause	Measure
Label sensor at the wrong position.	▶ Setting the position of the label light barrier correctly (refer to user manual, chap. „Operation“ > „Setting and Monitoring“ > „Positioning the label sensor“).
Unsuitable material inserted. No punch available or recognizable.	▶ Use punched or die cut label material.
Material incorrectly inserted. Punch on the wrong side.	▶ Insert material the right way round.
Wrong label length set.	 ▶ Checking the punch definition in the print job (Easy Plug: #IM). ▶ Checking the label length setting in the parameter menu (Print > Material > Label > Material type)
Label sensor is dirty.	▶ Cleaning the label sensor.
Ribbon inserted incorrectly. Ribbon runs under the label light barrier.	▶ Insert ribbon correctly.
Label sensor is not sensitive enough.	 ▶ Check the sensitivity setting of the label sensor.
Label sensor is defective.	 ▶ Replacing the label sensor.

After acknowledgement with key 4, the material is automatically advanced and the next punch is searched for.

5002 Material end

There is no label web in the rear material guide that contains the material end sensor.



Illustrated description for troubleshooting:
Click [here](#) or scan the QR code:



Possible causes	Solution
The label material is finished, i.e. the rear end of the material web has reached the yellow material guide in the printing module	► Load new roll of label stock
The label web runs outside of the rear material guide, which contains the material end sensor	► Insert the label material correctly into the material guide. Check the width adjustment of the material guides.

5004 Rew. mat. tear

Label material at the backing paper rewinder is torn off.

- Acknowledge by pressing the button.
- Secure label material to the rewinder.

5006 Printhead move

The print head lifting movement is not performed correctly.

Possible causes	Solution
The print head lifting motor is not (correctly) plugged in	► Check the connection cable of the head lifting motor; connect the cable if necessary
The print head lifting sensor is not (correctly) plugged in or it is defective	► Check cable and function of the print head lifting sensor ► If defective: replace sensor
Address of the motor output stage board on the CAN bus incorrectly assigned	► Re-assign the board addresses.

5007 Material feed

Fault at one of the stepper motor output stages on the 4-fold output stage board.

Possible causes	Solution
Overheating of the board	► Switch off the machine and let it cool down
Defect on the circuit board (if the error occurs repeatedly even after the machine has cooled down)	► Replacing the 4-fold output stage circuit board

5008 Ribbon end

The ribbon roll on the unwinding mandrel is used up. Depending on the type of ribbon roll, the end of the ribbon is fixed to the cardboard core (unwinding mandrel is blocked) or not (corresponds to a ribbon tear - the unwinding mandrel can rotate). For the firmware to reliably detect the "ribbon end" case, the roll diameter must also be less than 38 mm ($\varnothing > 38$ mm --> See error **5314 Ribbon tear** on page 228).

- ▶ Insert a new ribbon roll.

5009 Start error

During print/apply of a label, the machine has received another start signal.

Precondition: Dispenser > Start signal > Start error stop = "On".

- ▶ Check the labelling sequence; increase distance between products if required.

or

- ▶ Set parameter Start error stop to "Off".
- ▶ Acknowledge by pressing the ✓ button.

5063 Press roll

The press roll lever is not closed. Opening the lever causes the immediate deletion of all potentially queued status messages (e. g. ribbon end) and display of the "Press roll" message. Closing the lever automatically acknowledges the status message.



Illustrated description for troubleshooting:
Click [here](#) or scan the QR code:



- ▶ Close the press roll pressure lever as far as it will go.



A certain resistance must be overcome until the lever snaps in.

5064 Backing paper

Happens with dispenser version printers: Shows up, when the diameter of the rewinded backing paper roll has become too large.

- ▶ Clear the rewinding mandrel.
- ▶ Acknowledge by pressing the ✓ button.

5071 Material end unw

Occurs during operation with activated internal OD control. The message appears, if the material roll diameter has reached the critical value (settable by Options > Material OD Sensor > Materialend error).

- ▶ Replenish the material roll.

5072 Material end unw

Occurs during operation with activated internal OD control. The message appears, if no rotation of the material roll has been registered during at least 600 mm of material feeding.

- ▶ Check the material feeding; if necessary, replenish the material roll.

5074 Print module open

The print head pressure lever is not (completely) closed.



Illustrated description for troubleshooting:
Click [here](#) or scan the QR code:



- ▶ Close the print head pressure lever as far as it will go.



A certain resistance must be overcome until the lever snaps in.

5100 Printengine lock

Printengine error.

- ▶ Acknowledge by pressing the button.
- ▶ Switch device off and on again.

If the message continues to appear:

- ▶ Contact service technician.

5101 Headadjust error

Error during the running of the "Head Alignment" service function.

- ▶ Acknowledge by pressing the button.
- ▶ Contact service technician.

5110 Ribbon low

The diameter of the ribbon roll fell below the set warning diameter (see System > Print Control > Ribbon end warn.).

The message is triggered by the occurrence of a ribbon warning if the following setting is active at the same time: System > Print Control > Ribbon warn stop = "On".

- ▶ Acknowledge by pressing the key, then press the key to continue printing.

5200 Home position

The applicator did not reach its home position within the given time frame.

Possible cause	Solution
The applicator is jammed	▶ May the applicator move unhindered? – remove any obstacles
• Applicators driven by compressed air: The air supply may be interrupted or switched off • Cable not properly connected	▶ Check cable and compressed air connections; reconnect them properly, if necessary
Cable for interlock circuit (2-pole plug) not connected to connector box	▶ Connect interlock circuit.

5201 Touch down

The applicator did not reach its touch down position within the given time frame.

- ▶ Check cable and compressed air connections; reconnect them properly, if necessary.
- ▶ May the applicator move unhindered? – remove any obstacles.

5203 Touch down sens.

The touchdown sensor(s) was/were already triggered before the application.

- ▶ Check cable and compressed air connections; reconnect them properly, if necessary.

5204 Appl. Startererror

The device received another start signal during printing/applying a label.

Precondition: Parameter Options > Start Sensor > Start error stop is set to "On".

- ▶ Check the labelling procedure; increase the product distance.
- ▶ Set parameter Start error stop to "Off".

5205 Applicator gen.

General software error

- ▶ Please read the notes in section **General software errors** on page 196.

5215 Label on appl

The label presence sensor has detected that there is still a label on the applicator after application.

- ▶ Check application procedure or sensor adjustment and correct if necessary.

5216 No label on appl

The Label Presence Sensor has detected that there is no label on the applicator before application.

- ▶ Check application procedure or sensor adjustment and correct if necessary.

5224 End position

The applicator has reached the end position sensor during extension.

Possible cause	Solution
The product was missed or no product was available.	▶ Correct the timing of the sequence.
The end position sensor is reached before hitting the product = Wrong sensor position.	▶ Adjust the position of the sensor so that it can only be reached when the product is missing.

5302 Ribbon movement

Movement error in connection with ribbon winding or ribbon unwinding, i.e. at least one of the ribbon mandrels does not rotate correctly or not at all.

! Occurs when the length of the wound ribbon does not correspond to the length of the ribbon transported by the ribbon roller. This is an indication, for example, that the ribbon is wrapping around the ribbon roller (which it should not do).

Possible cause	Solution
Ribbon not inserted correctly	► Check the ribbon run. If necessary, insert ribbon correctly.
Parameter for the color side of the ribbon not set correctly	► Set parameter Print > Material > Ribbon > Color Side correctly
Operation of the machine as a dispenser without ribbon inserted. It was forgotten to set the printing process to thermal printing, therefore the foil control tries to tension the foil, which leads to the error.	► Set parameter Print > Material > Label > Print method to "Thermal printing".

5303 BLDC Com. Ribb. Rew

(BLDC communication ribbon rewinder)

Communication error of the CAN bus with the BLDC output stage for driving the ribbon rewinder.

Possible cause	Solution
	► Restart the machine
Loose contact on the CAN bus connection cable of the 4-fold motor output stage board	► Check the plug connector of the cable for tightness
Defect of the 4-fold motor output stage board	► Replace the circuit board

5304 BLDC Com. Rib. Unw

(BLDC communication ribbon unwinder)

Communication error of the CAN bus with the BLDC output stage for driving the ribbon unwinder.

Possible cause	Solution
	► Restart the machine
Loose contact on the CAN bus connection cable of the 4-fold motor output stage board	► Check the plug connector of the cable for tightness
Defect of the 4-fold motor output stage board	► Replace the circuit board

5305 BLDC Com. Mat Rew

(BLDC communication material rewinder)

Communication error of the CAN bus with the BLDC output stage for driving the backing paper rewinder.

Possible cause	Solution
	► Restart the machine
Loose contact on the connecting cable of the BLDC output stage	► Check the plug connector of the cable for tightness

Possible cause	Solution
Defect of the BLDC output stage board	► Replace the circuit board

5311 Remove ribbon!

The error occurs when thermal direct printing is set as the printing method but ribbon is inserted.

- Remove the thermal transfer ribbon from the machine.

5314 Ribbon tear

In general, the ribbon unwinding mandrel maintains the ribbon tension by trying to rotate the roll against the unwinding direction. If the unwinding mandrel can rotate freely all at once, it can be assumed that the film is torn or missing. To better distinguish this case from fault 5008, the roll diameter must also be more than 38 mm.

Possible causes	Solution
Ribbon is torn.	► Insert the ribbon newly.
No ribbon is inserted because the insertion was forgotten.	► Insert ribbon.
No ribbon is inserted because printing is to be done in direct thermal mode. You have forgotten to switch to direct thermal mode.	► Set parameter Print > Material > Label > Print method to "Thermal printing".
Ribbon roll is loosely seated on the unwinding mandrel.	► Check that the core of the ribbon roll has the correct inner diameter. If not, use another ribbon roll with a suitable diameter. ► Check that the core of the ribbon roll is seated on the ribbon mandrel without slipping. If not:  ► Adjust the spring plates on the ribbon unwinding mandrel so that the ribbon core is firmly seated.  ► (Alternatively) Replace the ribbon core adapters.

5315 Ribbon Diameter

Occurs during the initialization of the ribbon if the diameter of the ribbon roll calculated by the machine does not match the set ribbon roll parameters.

- Check and, if necessary, correct the settings of the following ribbon parameters:

- **Ribbon length** on page 65
- **Outer ribbon Ø** on page 65
- **Inner ribbon Ø** on page 65

5400 BLDC%x Overcurrent

Overcurrent at BLDC motor no. xx.

Possible cause	Solution
	► Restart the machine
Loose contact or damage to the motor connection cable	► Check the plug connector of the cable for tightness ► Check cable for damage
Motor defective	► Replace the motor
BLDC output stage board defective	► Replace the circuit board

5500 Unknown

General software error

► Please read the notes in section **General software errors** on page 196.

5501 General

General software error

► Please read the notes in section **General software errors** on page 196.

5551 MAX Tags failed

The maximum allowed number of consecutive faulty RFID tags has been reached (see parameter Options > RFID > Max Tags to stop).

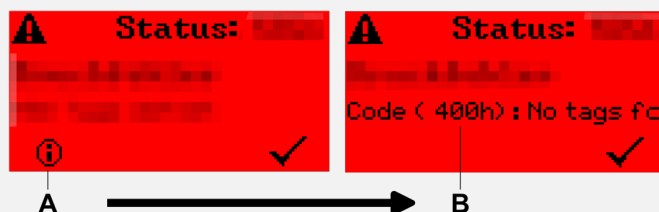
! Pressing button 1 on the control panel (, A) displays the error code (B) of the RFID module. This code provides further details about the cause of the error (for a list of all error codes, refer to the “How-to-RFID” manual, chapter 6.4, “RFID operation errors”).



5555 RFID Kill error

Error destroying the active RFID transponder.

! Pressing button 1 on the control panel (, A) displays the error code (B) of the RFID module. This code provides further details about the cause of the error (for a list of all error codes, refer to the “How-to-RFID” manual, chapter 6.4, “RFID operation errors”).



5556 Lock/Unlock failed

Error locking/unlocking a memory area on the active RFID transponder.

! Pressing button 1 on the control panel ( symbol, A) displays the error code (B) of the RFID module. This code provides further details about the cause of the error (for a list of all error codes, refer to the "How-to-RFID" manual, chapter 6.4, "RFID operation errors").



The diagram illustrates the process of viewing an error code. It shows two red status screens. Screen A, labeled 'A', displays a warning icon (a triangle with an exclamation mark) and a checkmark. Screen B, labeled 'B', displays the same warning icon and checkmark, but also shows the text 'Code (400h): No tags f.c'. An arrow points from screen A to screen B, indicating the sequence of the error display.

5590 Odd hex string

A character string was sent to the transponder (Easy Plug command #RFS) and was ought to be interpreted hexadecimal (use #RFS with parameter "B"). For this, the character string must consist of an equal number of characters. This was not the case, what triggered this error message.

- Send an equal number of characters.

5600 Job without #Q

The print job misses the declaration of the print amount (Easy Plug command #Q).

- Insert a #Q command with the print amount.

6000 Param. incorrect

Novram check sum error.

- Check the setting of the printhead resistance (parameter System > Hardware Setup > Head resistance) , before you confirm the status message – possibly the value is faulty.
- Confirm the error. All parameters are set back to the factory settings.

6001 Nov. prog. err.

Error during allocation of main memory.

- Switch printer off and then back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

6002 New prog. vers.

Occurs after firmware update. The printer hereby reports that new firmware is available.

- Confirm the error. All parameters are set back to the factory settings.

6003 Memory error

Error during partitioning of the main memory.

- Switch printer off and back on again after 30 sec. If the error message continues to appear, please contact the manufacturer.

6005 Fixfont data

Defective fixfonts.

- Load the firmware new.

Refer to the service manual, topic section "Firmware".

6006 Speedofont data

Defective speedo fonts.

- Load the firmware new.

Refer to the service manual, topic section "Firmware".

6007 Print ctrl. stop

The print control doesn't start, what means that the printer doesn't finish the initialization phase after switching it on.

- Read in the service manual, what to do:

6008 ZPL Fixfont data

Defective fixfonts.

- Load the firmware new.

Refer to the service manual, topic section "Firmware".

6009 ZPL Speedo data

Defective speedo fonts.

- Load the firmware new.

Refer to the service manual, topic section "Firmware".

6010 Printengine soft

General software error.

- Switch printer off and then back on again after thirty seconds.

Please read the notes in section **General software errors** on page 196.

6012 Start next job

The message appears at the end of a printjob, if the single job mode (System > Print Control > Single-job mode) is activated. It indicates, that the next printjob should be started.

- Acknowledge the status message. Start next printjob.

6030 New Parameters

By loading a new firmware version, some new parameters have been added to the parameter menu.

- None. The message is merely informativ.

6033 Print Head not supp.

(Print head is not supported)

The selected or detected print head is not supported for this machine.

- ▶ Install the appropriate print head.

6034 Printhead NTC error

Error at the NTC sensor of the print head. The print head is missing or defective.

- ▶ Install or replace the print head.

6036 Print Head not authenticated

A foreign, unauthorized print head was detected (print head is not from NOVEXX Solutions).

- ▶ Replace print head with a print head from NOVEXX Solutions.

6037 Print Head not programmed

The print head has an unprogrammed crypto chip.

- ▶ Have the crypto chip programmed or replace the print head with a print head with programmed crypto chip.

6038 Module xxx with MAC ID xxx not found

Error in the assignment of board addresses.

- ▶ Re-assign the board addresses.

6101 No sensor found

Error during the running of the "Sensor Test" service function.

- ▶ Acknowledge by pressing the  button.
- ▶ Contact service technician.

6200 Filesystem regis

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

6201 File sys. format

Error during formatting of the RAM disk or the external memory medium.

- ▶ Switch printer off and then back on again after thirty seconds. If the error message continues to appear, please contact the manufacturer.

6202 Drive open

Accessing the external memory medium failed.

- ▶ Format the memory medium using a PC. Try again to write onto the memory medium.
- ▶ Try another memory medium.

6203 Filesystem close

Accessing the external memory medium failed.

- ▶ Format the memory medium using a PC. Try again to write onto the memory medium.
- ▶ Try another memory medium.

6204 Disk directory

Work directory cannot be opened.

- ▶ Acknowledge by pressing the ✓ button.
- ▶ Check designationexistence of the work directory.

6205 Write disk

Error during writing on RAM disk or external memory medium.

- ▶ Acknowledge by pressing the ✓ button.

6206 Read disk

Error during reading from RAM disk or external memory medium.

- ▶ Acknowledge by pressing the ✓ button.

6207 No file card

No external memory medium found.

- ▶ Acknowledge by pressing the ✓ button.
- ▶ Check, if a memory medium is connected.
- ▶ If the memory medium was connected after switching on the printer: switch the printer off and on again.

6208 Drive xx full

Writing on drive xx failed, because there is not enough free space.

- ▶ Acknowledge by pressing the ✓ button.
- ▶ Free space on the drive.

6300 Out of memory

Not enough free memory available, to load additional print jobs. The job buffer is completely filled with print jobs.

- ▶ Delete spooler using the parameter Print > Delete Spooler.

6301 Incomplete job

The Easy Plug interpreter failed interpreting a certain print job to the end. The print job has possibly not been terminated by a #Q-command.

- ▶ Check, if the print job is properly terminated with #Q.

6302 System config

Error in the configuration of the firmware module for an electronic component.

The bottom line shows the module causing the error and the cause of the error:

<modul name> : <error cause>

Possible module names:

- CPU board
- Ribbon unwinder
- Ribbon rewinder
- Material rewind
- Material pull (control unit of the draw roller)
- TPH power (distribution board)
- BasicIO (board)
- 8IO 1 (board)

Possible error causes:

Error cause	Meaning	Solution
Fuses on distribution board	One of the fuses on the distribution board is defective or not inserted correctly or is not present.	► Check/replace the fuses.
Module access	The module is missing or communication with the module is not possible.	► Install module, if not available. ► Check a) whether the relevant board is correctly connected, b) whether the cables are undamaged
FW not compatible	The firmware cannot be loaded for this module. Wrong firmware or wrong hardware version.	After a firmware update: ► Acknowledge the error message. The missing firmware part for the module is then updated automatically. ► Check whether the installed firmware is up-to-date.
FW update	Firmware update failed.	► Check whether the installed firmware is up-to-date and suitable for the machine.
Module setup	The module cannot be put into operation.	

Example:

```
Status num: 6302
System config
Material pull : Module access
```

8001 Shared Memory

General software error.

- Switch printer off and then back on again after thirty seconds.
- Please read the notes in section **General software errors** on page 196.

8002 Stream Buffer

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8103 TrueDoc Font

Error: font with the number given is not contained in the system.

- ▶ Check font no., if necessary select another font.

8104 Speedo alloc

Fault while initializing the speedo fonts.

- ▶ Load firmware new.
- ▶ Refer to the service manual, topic section "Firmware".

8105 Load TrueType

Damaged font file.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Reload font file, if necessary select another font.

8106 Fonttype wrong

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8107 Character set

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8108 Symbol set

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8109 TT-specifications

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8110 Unknown char.

Character is not included in the character set (character set does not support all characters).

- ▶ Select another character / character set.

8111 Stream type

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8112 Font not supp.

The applied Truetype font is not supported by the system. Text, which uses this font, is ignored.

- ▶ Use another Truetype font.

8200 Fixfont number

Incorrect fix font no.

- ▶ Check fix font no., alter if necessary.

8300 Bar code corr.

Error: a bar code correction factor greater than $\pm 25\%$ has been selected.

- ▶ Reduce correction factor.

8301 Bar code data

Incorrect bar code data. The bar code data is not permitted for the selected bar code type.

- ▶ Use data permitted for the bar code type.

8302 Barcode checksum

Error during calculation of the bar code check sum.

- ▶ Check transmitted data.
- ▶ If the error continues to occur please contact the manufacturer. Send the transmitted Easy Plug data.

8303 Bar code sample

Error during calculation of the bar code sample.

- ▶ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

8304 Bar c. plain-copy

Error during integration of the plain-copy line in the bar code sample.

- ▶ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

8305 Bar code print

Error during calculation of the bar code print image.

- ▶ Acknowledge by pressing the  button.
- ▶ Check whether the transmitted data is permitted for the bar code type; if necessary alter the data.

8306 Plain-copy len.

Invalid: bar code plain-copy line has more than 300 characters.

- ▶ Reduce line length.

8307 Readline dist.

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8308 Bar code ratio

Invalid bar code ratio.

- ▶ Select another ratio.

8309 Module range

Maximum range of the bar code module exceeded.

- ▶ Reduce module range.

8310 Bar code element

Bar code element exceeds the maximum permitted size of 253 dots (21 mm).

- ▶ Reduce size of the bar code element.

8311 Barcode table

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8400 PDF417 ECC

Bar code PDF417: incorrect ECC level (Error Correction Level).

- ▶ Alter ECC level.

8401 PDF417 Lines

Bar code PDF417: invalid number of lines.

- ▶ Alter number of lines.

8402 PDF417 Columns

Bar code PDF417: invalid number of columns.

- ▶ Alter number of columns.

8403 PDF417 Style

Bar code PDF417: incorrect style.

- ▶ Alter style.

8404 PDF417 Command

Bar code PDF417: incorrect command.

- ▶ Acknowledge by pressing the ✓ button.
- ▶ Check and alter commands.

8405 PDF417 Size

Bar code PDF417: incorrect size.

- ▶ Alter size.

8406 PDF417 Details

Bar code PDF417: incorrect details.

- ▶ Alter details.

8407 PDF417 Coding

Bar code PDF417: coding error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Acknowledge by pressing the ✓ button.

8450 Aztec wrong Rune value

Aztec bar code: wrong rune value - Only values from 0 to 254 are admissible.

- ▶ Correct the rune value.

8451 Aztec wrong Format

Aztec bar code: Bar code data does not match the specified bar code size.

! Default header and error correction level are also taken into account.

- ▶ Correct bar code data and/or bar code size.

8452 Aztec invalid FileID

FileID is invalid. The fileID is corrected automatically:

- Invalid characters are deleted
- Lower case characters are changed into uppercase characters

8500 Code 25Int len.

Bar code Code 25 Interleaved: input line too long.

- Shorten input line.

8501 Postcode length

Bar code postcode: invalid data length.

- Check length of the transmitted data and set it to the permitted length.

8600 EAN Length

Bar code EAN: invalid data length.

- Check length of the transmitted data and set it to the permitted length.

8601 UPCE Numbers sys.

Error: First data character of the transmitted data is not 0 or 1.

- Alter first data character to 0 or 1.

8705 IDM rows/columns

The input data does not match the given matrix or the number of rows/columns is invalid.

- Change the number of rows/columns or the input data.

8760 EAN128 field len

The number of data after a data identifier does not correspond to the definition for this data identifier.

- Change the number of data.

8761 EAN128 Data type

The data type (alphanumeric, numeric) after a data identifier does not correspond to the definition for this data identifier.

- Change the data type.

8762 EAN128 Ident.

Invalid data identifier.

- Change the data identifier.

8800 Maxicode Mode

Maxicode: faulty mode

- Change mode.

8801 Maxicode Sys no

Maxicode: incorrect system no.

- Correct system no.

8802 Maxicode Zipcode

Maxicode: incorrect zipcode.

- ▶ Correct zipcode.

8803 Maxicode Class

Maxicode: faulty class code.

- ▶ Correct class code.

8804 Maxi. Sec. mess.

Maxicode: secondary message has an invalid length.

- ▶ Correct length of secondary message.

8805 Maxicode Country

Maxicode: faulty country code.

- ▶ Correct country code.

8830 Cod49 Datalength

The user data string is too long. Not all characters can be coded in the bar code. The bar code is not printed.

- ▶ Shorten the data string.

8031 Cod49 wrong data

The data string contains wrong characters. The bar code is not printed.

- ▶ Correct the content of the data string.

8850 Unknown filetype

- ▶ Graphic files with the extension declared in the Easy Plug command #YG are not supported.
- ▶ Transform the graphics file into another file format or use another graphic in a supported format. Check, if the spelling of the file extension is correct.

8851 Graphic open

The graphics file declared in the Easy Plug #YG command cannot be found on the compactflash card. Possible reasons are:

- Path and/or designation of the graphics file stored on the compactflash card doesn't match the path and/or designation declared by the #YG command.
- The file is not available on the compactflash card.
- ▶ Check if the spelling of the graphics file is the same both in the #YG command and on the compactflash card.

8852 Graphic header

A graphics file declared by a Easy Plug #YG command should be proceeded. The file header doesn't match the file.

- ▶ The graphics file is possibly faulty. Check the file and replace it if necessary.

8853 Graphic palette

A graphics file declared by a Easy Plug #YG command should be proceeded. Error reading the graphics palette.

- ▶ The graphics file is possibly faulty. Check the file and replace it if necessary.

8854 Graphic read

A graphics file declared by a Easy Plug #YG command should be proceeded. Error reading the file.

- ▶ The graphics file is possibly faulty. Check the file and replace it if necessary.

8900 Codablock columns

Bar code Codablock: invalid number of columns.

- ▶ Correct number of columns.

8901 Codablock rows

Bar code Codablock: invalid number of rows.

- ▶ Correct number of rows.

8902 Codablock softw.

Bar code Codablock: software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8903 Codablock infogr

Bar code Codablock: info not in line.

- ▶

8950 Logo open

Failure when attempting to read a logo, which has previously been copied on RAM disk or on memory card (thus using Easy Plug command #DK).

- ▶ Repeat loading the logo via #DK command.
- ▶ In cases of continuous occurrence of this error, please contact the technical support.

8951 File format

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

8952 Not installed

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

9000 Wrong errornum

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

9001 Software Error

General software error.

- ▶ Switch printer off and then back on again after thirty seconds.
- ▶ Please read the notes in section **General software errors** on page 196.

9005 No Printhead

Printhead could not be detected. Possible causes:

- Printhead cable not connected
 - Wrong printhead type
 - Defective printhead cable
 - Defective CPU board
 - Printhead cable plugged into wrong connector on the CPU board
- ▶ Check printhead cable, printhead and CPU board and replace defective parts.

9007 Bad MAC Address

This error message is displayed, if an invalid MAC address is programmed to the CPU board. Valid means, the MAC address matches the range *00.55.DA.xx.xx.xx*.

In this case, the network will not be initialised. To enable work with the network, a valid (Avery-) MAC address must be programmed on the board. This can only be done by an authorized service technician or by the manufacturer.

- ▶ Acknowledge the status message. The printer will be starting, but cannot be used with a network.
- ▶ Contact the technical support for a new programming of the board's MAC address.
- ▶ If a new programming is not possible, exchange the CPU board.

9008 Powerfail signal

"Powerfail" is a signal at the power supply, which is normally activated for a short time, after the printer has been switched off. It triggers the storing of parameter settings and counter values, using the left-over of supply voltage.

The powerfail signal is already active after switching the printer on. The following causes are possible:

- Defektive power supply

- Defektive data cable
- Defektive board
- ▶ Switch the printer off and on again. If the error occurs repeatedly:
- ▶ Check the hardware (see above).
- ▶ After acknowledging the message, the printer works normal. But be aware that the powerfail signal is deactivated, what means, that no parameter settings and counter values are stored, when the printer is switched off.

9009 Temporary MAC

Temporary MAC address.

This error message is displayed, if the MAC address has the value *00.55.DA.00.00.00*. This MAC address is used only during production.

- ▶ Acknowledge the status message. The printer will be starting and the network can be used.
- ▶ Contact the technical support for a new programming of the board's MAC address.
- ▶ If a new programming is not possible, exchange the CPU board.

9010 Emul event overf

Event buffer overflow

This error can only occur, if Printer Language > Print Interpret. = "EasyPlug/ZPL Emu". Either you switch very often between Easy Plug and ZPL emulation, or the print data is faulty.

- ▶ Check the print data.

9011 Load firmware for x

At least one external device has no valid (e.g. an incomplete) application program loaded. This is the reason, why the device remains in the bootloading status and signalizes this status message. „x“ can be one of the following module names:

- Feed driver
- Ribbon driver
- Peripheraldriver
- USI interface
- Intern. rewinder
- Applicator int.
- ▶ Load a valid application program.

9013 Head voltage

Faulty 5 V print head supply voltage. Possible causes:

- Print head is connected to the wrong connector on the CPU board
- Short circuit, possibly the print head is defective
- ▶ Check, if the print head is connected to the correct connector on the CPU board
- ▶ Replace the print head

9014 Motor voltage

Faulty 45 V motor supply voltage. Possible causes:

- Print head is connected to the wrong connector on the CPU board
 - Short circuit, possibly the print head is defective
- Check, if the print head is connected to the correct connector on the CPU board
- Replace the print head

9015 Networkinit.

Error during the network initialization.

- Contact your network administrator.

9016 DHCP Failed

DHCP failed. This may happen, if parameter Interface > Network > IP Addressassign is set to “DHCP”, but no IP-address can be drawn.

- Contact your network administrator.

9018 #!CA wrong Pos.

The #!CA command is placed at an inadmissible position – the Easy Plug interpreter can not proceed the command at this position (e. .gduring the loading of files onto a memory card).

- Call the #!CA command at an admissible position.

9021 Unmg. Exception

Unmanaged exception

General software error.

- Switch printer off and then back on again after thirty seconds.
- Please read the notes in section **General software errors** on page 196.

9022 No network link

This message can only occur, if the Ethernet address assign is set to DHCP. The cause is nearly always a badly connected network connector.

- Check, if the network connector is plugged in properly.

9023 Filename: Functionname() Line: xxx

This status message indicates a firmware error. The error source is located in the source file “Filename” in function “Functionname()” in line xxx.

- Switch device off and on again.

If the error occurs repeatedly:

- Contact the manufacturer.

When doing so, it is important to be able to reproduce the error. Gather the following informations before calling the technical support of the manufacturer:

- Displayed information about the error source

- Label layout, logfiles, etc. as described in chapter **Unspecific errors** on page 197.

9024 Not possible !

Detecting the material length (a function, which is normally used with MLI) is not possible, because a printjob is currently processed.

- Retry as soon as the printjob is processed.

9028 System Exception

General software error

- Please read the notes in section **General software errors** on page 196.

9031 Log file: nnnn

File access error. nnnn = error code of the operating system.

- Repeat the operation, which led to this message. If it comes to this message repeatedly, send a message to the Technical Support, including the error code.

9032 EP file log stop

Internal error during Easy Plug file logging (Tools > Diagnostic > EasyPI. file log).

- Repeat operation. If the error occurs repeatedly: switch off the file logging.
- Use parameter Tools > Diagnostic > EasyPI. file log only for error analysis purposes. Using the parameter in continuous operation can cause error messages, which are hard to understand.

9035 No printpr. stop

This status message may appear during the loading of new firmware onto the H8 (64 Bit) or onto boards, which are connected to the H8 (e.g. Applikator Interface).

- Switch the printer off and on again and retry the firmware loading.

9036 Initializing...

During an initialization process (**Initializing...** warning active), one of the following functions was triggered:

Ready view:

- Funktion "Detect label length"

Home view:

- Key 
- Key 
- Keys 1+2
- Keys 2+3
- Keys 1+3

The error message is self-confirming.

9038 No gap found

The automatic calibration of the label pitch (keys 3 + 4) failed because no punch was detected after 500 mm feed.

If the label distance is greater than 500 mm:

- ▶ Enter label pitch value manually in the parameter menu.

If the label pitch is less than 500 mm (punch was not detected):

- ▶ Check function/setting of label sensor, see description of measures for error **5001 No gap found** on page 222.

9039 Ribbon mode chg.

The ribbon mode was changed between two consecutive printjobs via Easy Plug command (from thermal transfer to thermo or vice-versa).

- ▶ Check the ribbon mode setting and, if necessary, change the setting (SYSTEM PARAMETER > Ribbon autoecon.).

9040 No Time Server

Comes up one times at startup, if Interface > Network > Services > Time client = "On" and there is no response from the set time server.

- ▶ Check the time server availability respectively the time server settings.

9041 System configuration

Faulty system configuration (e.g. missing firmware module for the selected machine type)

- ▶ Restart the machine.

If the error occurs again:

- ▶ Reload firmware.

If the error occurs again:

- ▶ Search for defective hardware and replace it.

9043 CPU manuf. data

Both copies of CPU manufacturing data are invalid.

- ▶ Restart the machine.

If the error occurs again:

- ▶ Replace the CPU board.

9050 JSON error

Occurs when there is a syntax error in the JSON file that defines the Favorites menu item.

- ▶ Check syntax of the file `Favorites.json` in folder `/var/novxx/storage/internal/Flash/Customization/` of the machine.

9053 CPU and backup machine data different

The machine data on the CPU board and on the distributor board are correct, but have different contents.

9054 Backup machine data wrong

The data on the CPU board is correct, the backup data on the distribution board is *not* correct.

9055 CPU machine data wrong

The data on the CPU board is *not* correct, the backup data on the distribution board is correct.

9056 Machine data wrong or missing

The data on the CPU board and/or on the distribution board are not correct or not present.

9057 Adjust head idle position

Occurs, if the print head idle position is set to +31.

For details refer to chapter [Print head idle adjustment](#) on page 269.

9058 Printhead not supported for Thermal Transfer print

The installed (high endurance) print head type is not suitable for thermal transfer printing.

This error message shows up in the following situations:

- During system start
- After parameter setting Print > Material > Label > Print method = "Thermo transfer"
- Each time, a label is to be printed

 Printing is not possible.

- ▶ Select the "Thermal printing" print method.
- ▶ Install another print head that is suitable for thermal transfer printing.

9059 Printhead not recommended for Thermal Direct print

The installed (standard) print head type is not recommended for thermal direct printing.

This error message shows up in the following situations:

- During system start
- After parameter setting Print > Material > Label > Print method = "Thermal printing"

 Printing is still possible, but not recommended.

Turn off error message: System > TD wrong head error = "Off"

- ▶ Select the "Thermo transfer" print method.
- ▶ Install another print head that suits better for thermal direct printing.

9100-9119 Messages during firmware update

9100 Invalid format

Occurs during a download. The sent data is faulty, e. g. regarding an

- invalid data format
- invalid check sum
- invalid address
- invalid record type

► Switch printer off and on again. Check the download data.

9101 Invalid Header

Occurs during a download. The sent files have a format error in the header.

► Switch printer off and on again. Check the download data.

9102 Inv.Board Rev.

Occurs during a firmware download. The sent firmware does not match the version of the CPU board.

► Switch printer off and on again. Check the download data.

9103 Inval. firmware

Occurs during a firmware download. The sent firmware does not match the installed CPU board.

► Switch printer off and on again. Check the firmware file.

9104 Inv. Data Size

Occurs during a download. The size of the sent data doesn't match the file size indicated in the header.

► Switch printer off and on again. Check the download data.

9107 Flash Overflow

Occurs during a download. The flash memory on the CPU board is full. No more data can be loaded.

► Switch printer off and on again.

9108 Flash Ovf. Diag.

Occurs during a download. The flash memory on the CPU board has not enough free memory space left for diagnose data.

► Delete data blocks in the flash memory or reduce max. size of the diagnose data.

9109 Flash Ovf. Params.

Occurs during a download. The flash memory on the CPU board has not enough free memory space left to store the current parameter settings.

! After a restart, the parameters are set to "Factory setting".

► Delete data blocks in the flash memory.

9110 Flash Write Err.

Occurs during a download. The flash memory can't be accessed for writing.

- Switch printer off and on again.

9116 Ser. Disp. Missing

Occurs during a firmware update of a serial operation panel, if no such device was found.

- Check the configuration.

The status message is cancelled automatically. The download continues.

9117 Device Unknown

Occurs during a firmware update, if the device information in the header is missing.

- Switch printer off and on again. Check the configuration.

9122 Checksum error

Checksum error while loading a firmware file. The checksum of the loaded data doesn't match the calculated checksum.

- Repeat the download.
- If the error continues to occur, the file is probably damaged or corrupted. Check/ exchange the firmware file.

9123 Memory unavailable

Error while loading a firmware file. There is not enough free memory available.

- Restart machine and repeat the download.

Maintenance

REPLACING RUBBER ROLLERS

The rubber rollers are held in place by a bayonet coupling and can be replaced without any tool. This description counts for the following rollers (see fig.):

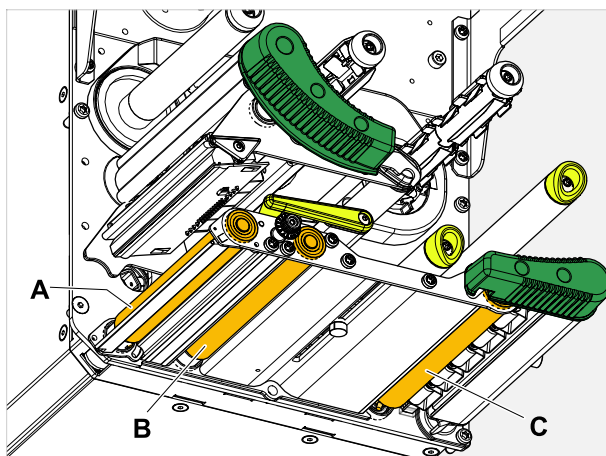


Fig. 66: **A** Print roller, **B** Feed roller, **C** Draw roller (only at XDM 94x)



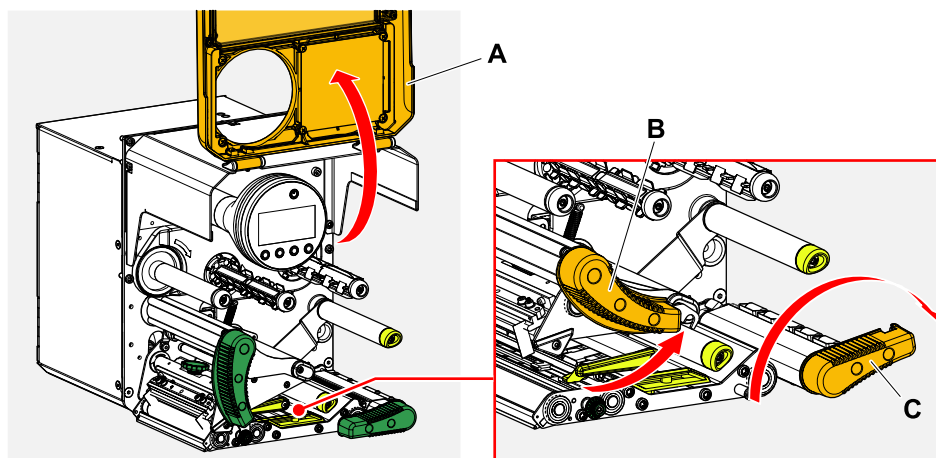
▶ Video: "Feed roller exchange"

▶ Video: "Toolfree maintenance"

Procedure

Removing a roller:

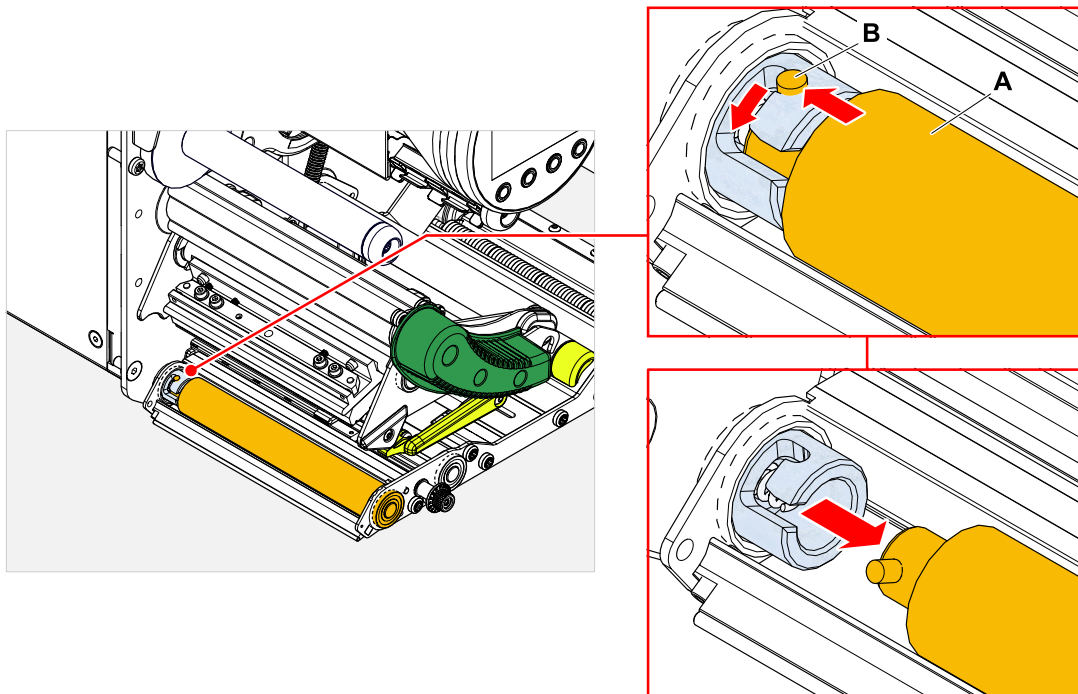
1. Switch off the machine.
2. Open the front hood (A).



3. Open the print head pressure lever (B, figure above) and the draw roller lever (C, figure above, only XDM 94x).
4. (Optional) Remove the label web from the print module.

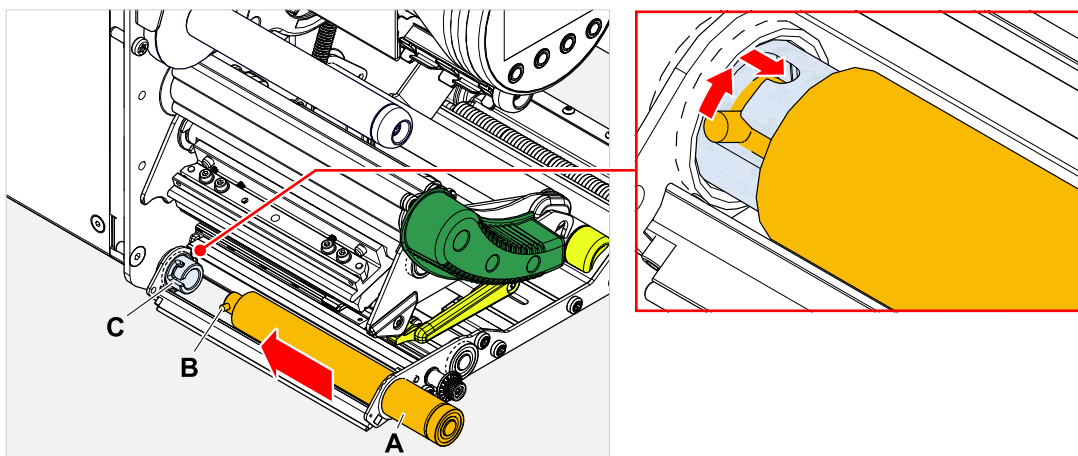
5. Press the print roller (A) firmly in up to the stop, then turn it to the left and pull it out.

! When the machine is switched off - what it should be - the clutches rotate with it. The print roller can be easily blocked by holding the feed roller and vice versa. Turn the draw roller to the left as quickly as possible to take advantage of the mass inertia.



Installing:

6. Push the roller (A) through the external bearing plate.



7. Turn the roller so that the steel pin (B, figure above) at its end engages in the opening of the bayonet coupling.
8. Push the roller firmly in up to the stop, then turn it to the right up to the stop.

PRINT HEAD REPLACEMENT

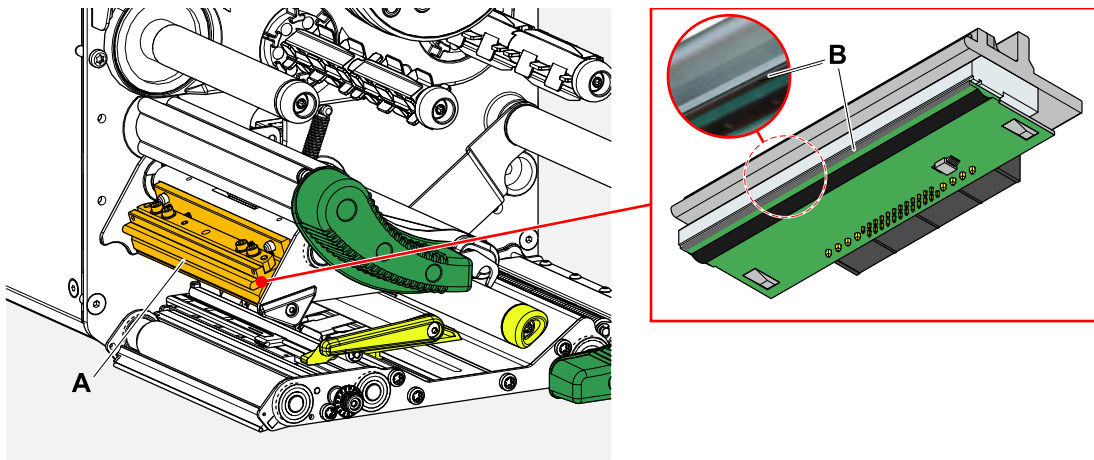


Fig. 67: **A:** Print head, **B:** Thermal strip at the print head



WARNING!

Burn hazard. The print head becomes hot during operation.

- ▶ Allow print head to cool before touching.
- ▶ Be careful whenever touching the print head.

CAUTION!

Possible damage to the print head due to electrostatic discharge or contact with sharp edges.

- ▶ Switch off the machine at its main switch before replacing the print head!
- ▶ Always protect the print head against electrostatic discharge when performing maintenance and cleaning work! Use ESD protective equipment!
- ▶ Never touch the thermal strip with bare hands!
- ▶ Never contact the thermal strip with sharp objects!

If no professional ESD protective equipment (ESD wristband, ESD shoes, ...) is available:

- ▶ Discharge your own body before touching the print head, e.g. by touching an earthed object (e.g. radiator) in your vicinity!

! Mind the following *before ordering* an exchange print head:

- The printhead for the XDM/XPM 945 differs between LH and RH version of the machine!
- Change from a 5" print head to a 6" print head or vice versa on the XDM/XPM 945/946:
 - Possible with LH machines *without any problems*, the print head is automatically recognised
 - *Not possible* with RH machines

!  Video: "Print head replacement"

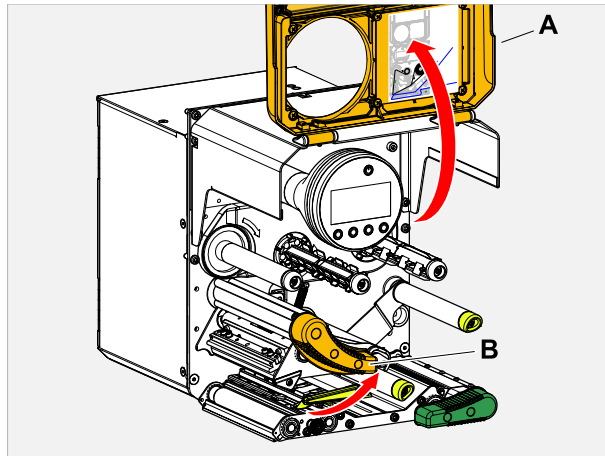
 Video: "Toolfree maintenance"

Procedure

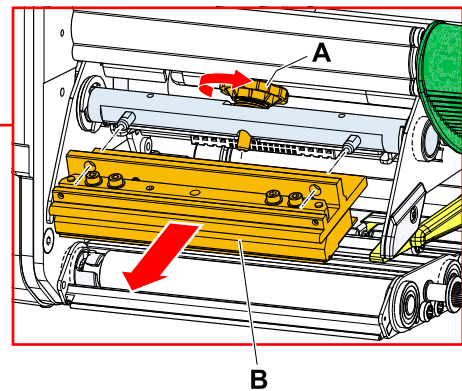
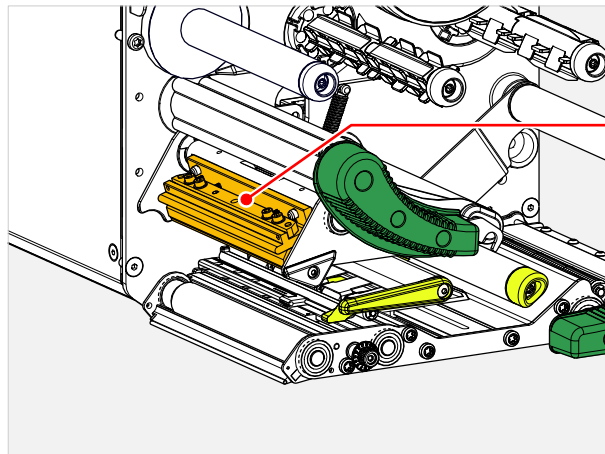
Removing the print head:

1. Switch off the machine.

2. Open the front hood (A, figure below).

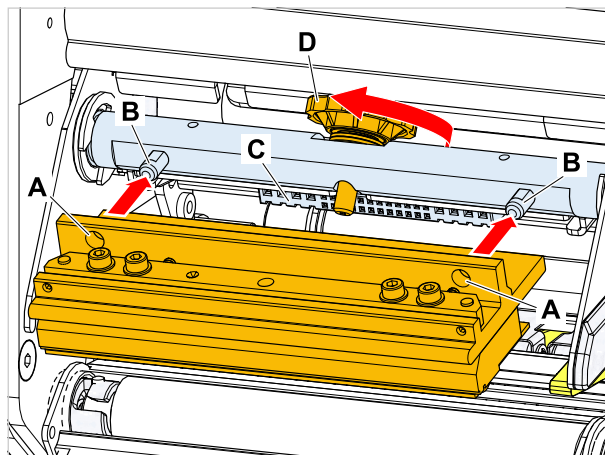


3. Open the print head pressure lever (B, figure above).
4. (Optional) Loosen the ribbon web and push it aside at the print head.
5. Loosen thumb screw (A) and pull print head (B) forward.



Installing the print head:

6. Position the new print head with the holes (A) on the bolts (B). Carefully press the print head with the plug contacts on the rear side into the connector (C).



7. Tighten thumb screw (D, figure above).

What to do next

It is not necessary to adjust the print head resistance or the print head width because the print head is equipped with a memory chip on which all data relevant for operation is stored.

This stored print head data enables the machine control system to determine whether it is the correct print head type. If this is not the case, the following error message appears:

```
6033
Print Head not supp.
```

If no print head or a defective print head is installed, the following error message appears:

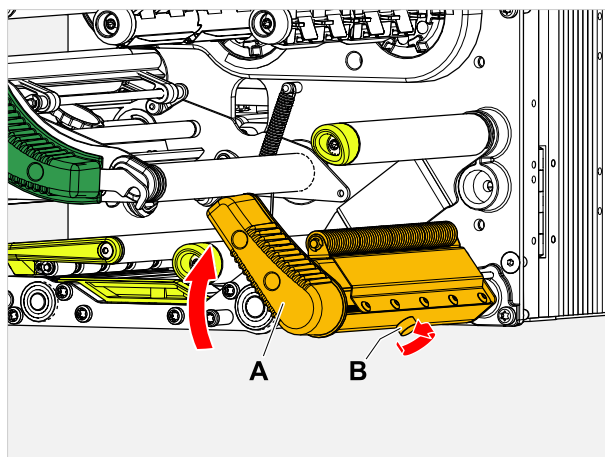
```
6034
P. Head missing or defect
```

(XDM 94X) DISASSEMBLING THE PRESSURE LEVER AT THE DRAW ROLLER

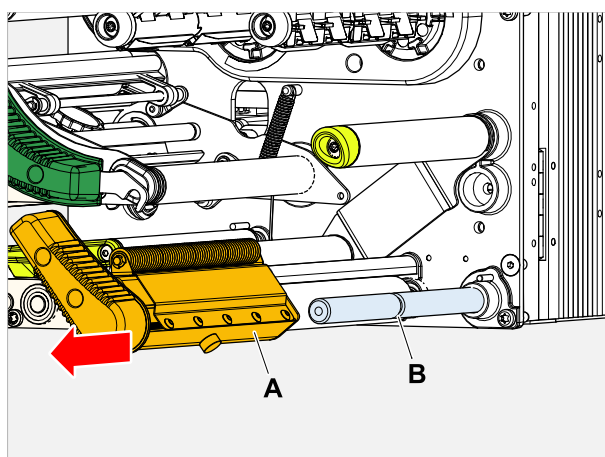
The pressure lever can be removed without tools.

Procedure

1. Open the draw roller pressure lever (A).



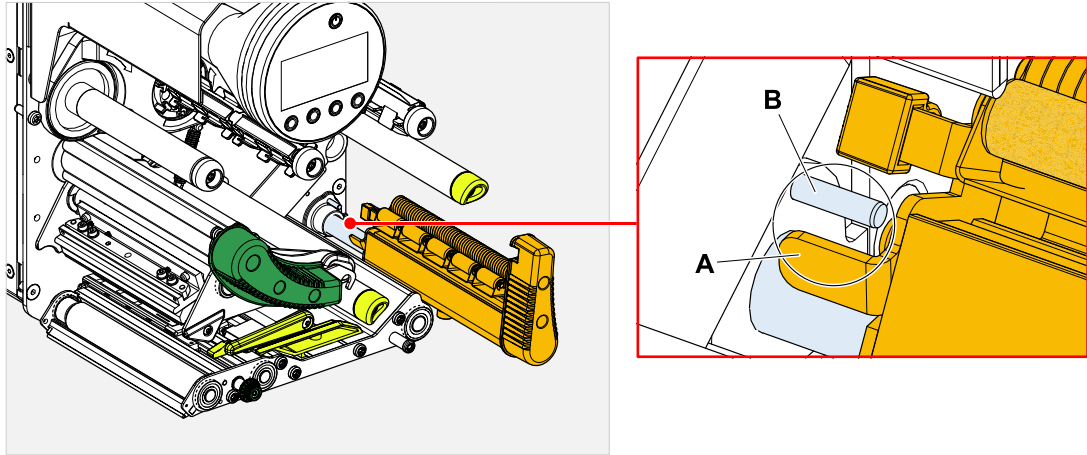
2. Loosen the thumb screw (B, picture above) until the complete pressure lever can be pulled off the axle.
3. Remove the pressure lever.



4. Assembly:

- a) Push the lever onto the axle, but do not push it all the way to the rear.
- b) Turn the lever so that the stop (A) on the lever is to the left of the bolt (B).
- c) Tighten the thumb screw only very lightly. Now move the lever slightly on the axle and feel it when the thumb screw engages in the groove (B, picture above) on the axle. Tighten the thumb screw.

! The thumb screw must engage in the groove on the axle (B, figure above)..



CLEANING THE CLEAR LABEL SENSOR (INTENSIVELY)

Before you begin

Tools:

- Hex socket screwdriver 3 and 4 mm
- Torx screwdriver Tx10, Tx20

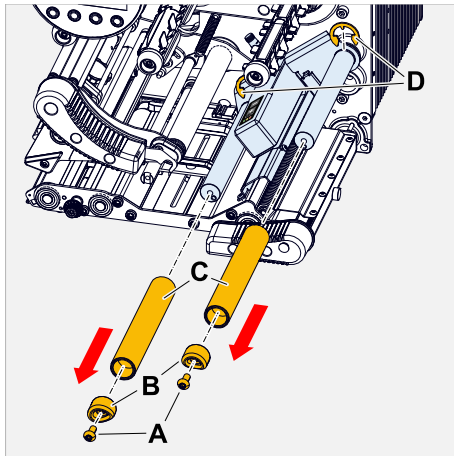
About this task

Due to the small gap between the upper and lower part, adhesive residue from label webs can accumulate in the area of the fork opening. To remove these residues thoroughly, it is best to disassemble the sensor fork.

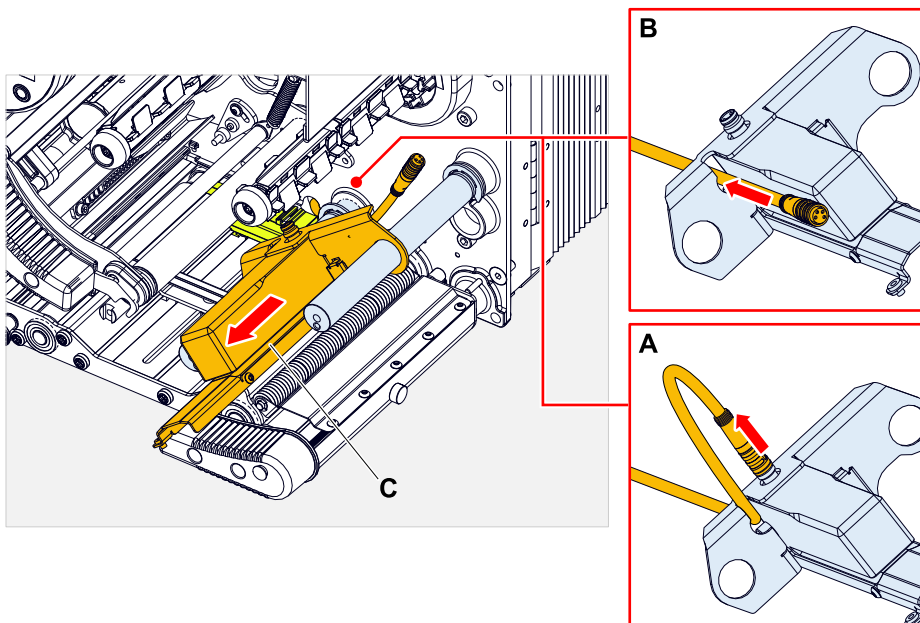
Procedure

1. Open the front hood.

2. Unscrew the screws (A), remove the end caps (B) and rollers (C):

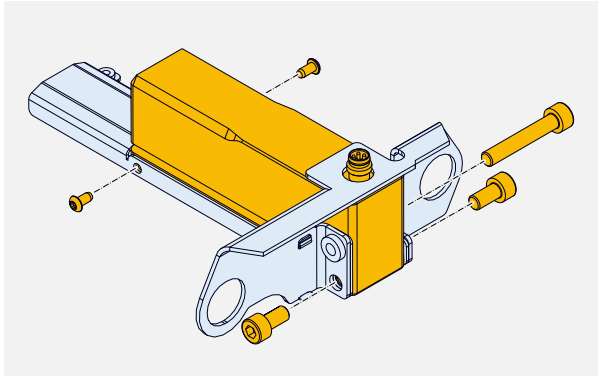


3. Remove the retaining rings (D, picture above).
4. Disconnect the cable from the sensor (A).

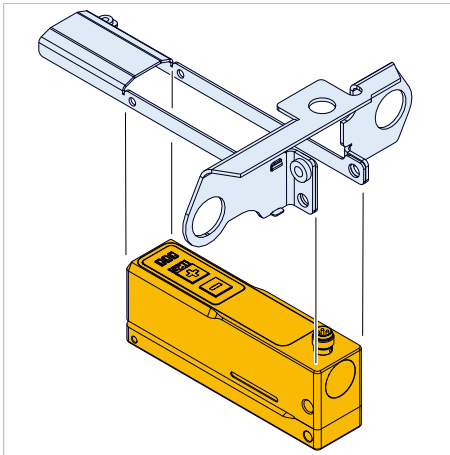


5. Pull the cable end out of the retaining plate (B, fig. above) and at the same time pull the sensor with holder off the axles (C, fig. above).

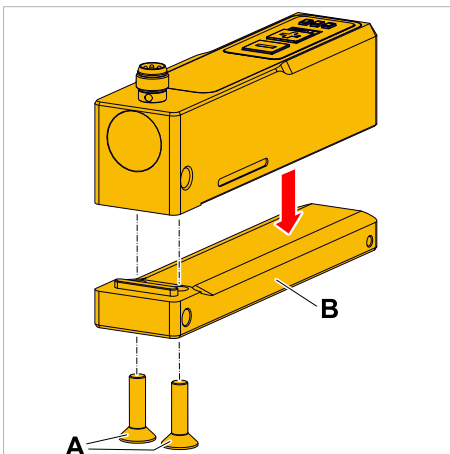
6. Unscrew the 5 screws as shown:



7. ... and remove the sensor from the holder:



8. Unscrew 2 screws (A) on the underside of the sensor and remove the lower part (B).



9. Remove adhesive residue from the upper and lower part with a soft cloth.
10. Perform the installation in the reverse order to the removal.

- ! Observe the following:
- Tighten screws evenly to avoid mechanical stresses.
 - Observe the maximum torque of the screws (M3: 0.5 Nm, M4: 1.4 NM, M5: 2.5 Nm)

What to do next

1. Perform sensor calibration.
2. Re-teach the sensor to the label material used.

Related tasks

Calibrating the clear label sensor on page 276

Dynamic teaching of the integrated clear label sensor on page 270

Static teaching of the integrated clear label sensor on page 272

Settings

CORRECTING THE PRINT POSITION

Describes how to correct the print position for very long labels.

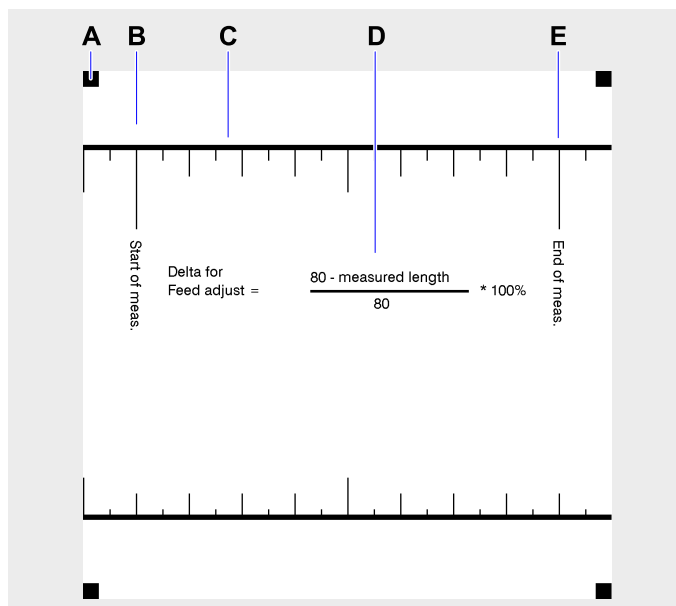
Before you begin

- Print > Material > Label > Punch offset = "0 mm"
- Print > Format > Print direction = "Foot first"
- Required label material: minimum length 100 mm, ideally 200 mm
- Machine is in service mode

Procedure

Compensating length misalignment:

1. Insert recommended label material.
2. Print a feedadjust label (Tools > Adjustment > Feedadjust label).



3. Measure the distance between the two marks "Start of meas." (B) and "End of meas." (E).
4. Put the measured distance "measured length" into the calculation formula (D) on the label.
5. Calculate "Delta for Feed adjust" value using the formula.
6. Put the "Delta for Feed adjust" value into Tools > Adjustment > Feed adjust.
7. Print another feedadjust label. Check, if the black squares (A) or the first line of the scale are printed exactly on the label front edge. If this is not the case, proceed step 8:
8. (Optional) Measure the distance between the black squares and the label front edge. Put the value into Tools > Adjustment > Punch y calibr.. Repeat steps 7 and 8, until the black squares exactly flush the label front edge.

Compensating impression misalignment:

9. Print a feedadjust label.
10. Measure the distance between leading label edge and "Start of meas." line.
11. Identify the deviation from the target value (10 mm) and type it in under Tools > Adjustment > Punch y calibr..

! Positive values shift the print image *against* feed direction, negative values shift it *in* feed direction.

12. Print feedadjust label and check it. If necessary, repeat steps 10 and 11.

ADJUSTMENT OF MATERIAL FEEDING (XDM 94X)

This setting affects the ratio of the speeds between the print rollers (picture below: B) and the draw roller (picture below: C). By default, all rollers are set to the same speed. This setting does not need to be changed for most label stock.

This applies to both forward and backward feed:

- Setting value >100%: The print rollers rotate *faster* than the draw roller
- Setting value <100%: The print rollers rotate *slower* than the draw roller

Adjusting the forward feed

It is only necessary to adjust the setting if problems with the forward feed occur, such as:

- Loop formation at the dispensing edge (set value to <100%)
- Rattling of the draw roller (set value to >100%)
- Carrier material tears at the dispensing edge (set value to <100%)

Parameter for the setting: Tools > Adjustment > Forw feed rat. (see **Forw feed rat.** on page 101).

The following diagrams show schematically the situation in the normal case and with loop formation at the dispensing edge before and after the adjustment.

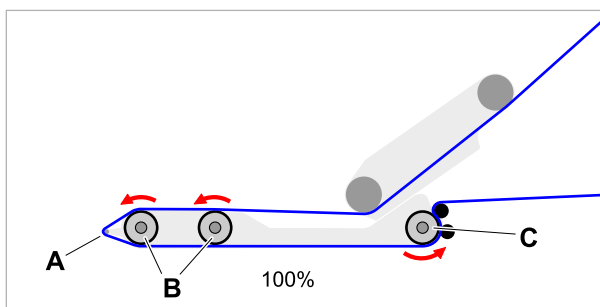


Fig. 68: Normal operation (Forw feed rat. = 100%): print rollers (B) and draw roller (C) rotate at the same speed.

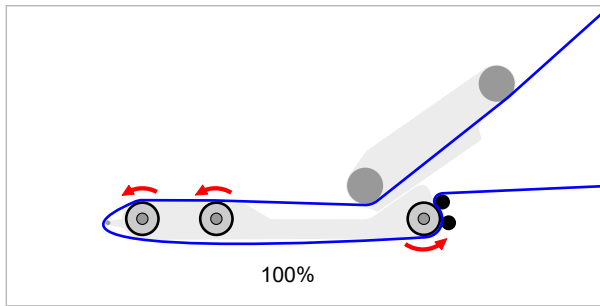


Fig. 69: Normal operation (Forw feed rat. = 100%): A loop is formed around the dispensing edge (picture above, A). The labels are dispensed poorly or not at all.

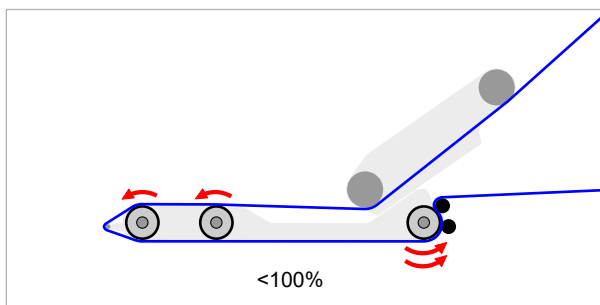


Fig. 70: Corrected feed (Forw feed rat. <100%): The draw roller rotates faster than the print rollers. This prevents the formation of loops.

Adjusting the backward feed

It is only necessary to adjust the setting if problems with the backward feed occur, such as:

- Loop formation at the dispensing edge (set value to <100%)
- Carrier material tears at the dispensing edge (set value to <100%)

Parameter for the setting: Tools > Adjustment > Backw feed rat. (see **Backw feed rat.** on page 102).

The following diagrams show schematically the situation in the normal case and with loop formation at the dispensing edge before and after the adjustment.

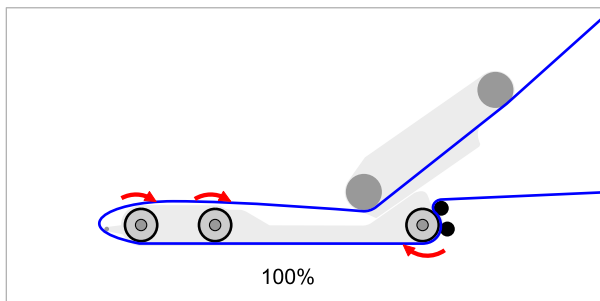


Fig. 71: Normal operation (Backw feed rat. = 100%): Due to the material properties a loop is formed above the dispensing edge.

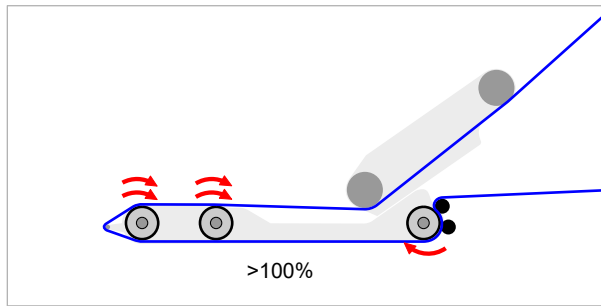


Fig. 72: Corrected feed (Backw feed rat. >100%): The print rollers rotate faster than the draw roller. This prevents the formation of loops.

SENSOR TEST/ADJUSTMENT

Sensor test

- Call Tools > Test > Sensor test:



- Select the desired sensor with the arrow keys.
- Compare the displayed value with the value in the following table.

! When checking the sensors, ambient light must be avoided. Therefore keep the front covers and the housing cover closed during the sensor test.

If the value displayed at the machine differs greatly from the value given in the table, this can have one of the following causes:

- the sensor in question is dirty and must be cleaned (blow out with compressed air)
- the sensor is not correctly adjusted and must be readjusted (Tools > Adjustment > Sensor Adjust)
- the sensor is defective and must be replaced

Sensor adjustment

- Call Tools > Adjustment > Sensor Adjust:



- Select the desired sensor with the arrow keys.
- Press key 4.

The "Power level" field is activated.

- Use the arrow keys to change "Power level" so that "Value:" is within the range specified in the table (below).

Overview of sensors

Sensor ID	Sensor name	Description	Typical values / Test
00.01	Punch	Gap/punch sensor	• Gap: 0.8 V • Label: 3.3 V See Gap sensor adjustment on page 268
00.03	Reflex	Reflex mark sensor bottom	Connector open: 5.0 V
00.04	Refl.t	Reflex mark sensor top	Connector open: 5.0 V

Sensor ID	Sensor name	Description	Typical values / Test
00.05	Matend	Material end sensor	- w/o material: 0.0 V - with material: 5.0 V See Material end sensor adjustment on page 268
00.06	Press	Sensor on the pressure roller of the draw roller	- Lever closed: 0.0 V - Lever open: 5.0 V
00.07	H.move	Sensor print head lift mechanics	Connector open: 5.0 V
00.08	AUX1	w/o function	Connector open: 5.0 V
	LTMA home	Home position sensor at the LT-MA applicator. Only with Options > Selection > Periph. device = "LTMA".	- Applicator not in home position: 0,0 V - Applicator in home position: 5,0 V
00.09	Lever	Sensor on print head closing lever	- Lever closed: 2.3 V - Lever open: 5.0 V
00.10	AUX2	w/o function	Connector open: 5.0 V
00.11	StartS	Product sensor	Connector open/no product: 0 Product detected: 1
00.12	Lab.int	Internal alternativ label sensor at the BasicIO board or the Basic USI board.	Connector open/no label: 0 Label detected: 1
00.13	H-Temp	Temperature sensor at print head	- Machine out of operation: Room temperature - Machine in operation: appr. 70°C
00.15	APSF s.	Encoder: Current belt speed	xx.x m/min
00.16	APSF p.	Encoder: Counter for encoder pulses	xxxx
00.17	APSF l.	Encoder: Counter for the distance covered by the measuring wheel of the encoder	xxx mm
00.18	APSF s.	Rotary encoder: Status display - for internal use only	--
00.19	Mat.Rew	Currently calculated diameter of the backing paper rewinder	xxx mm
00.20	Rib.Unw	Currently calculated diameter of the ribbon unwinder	xxx mm
00.21	Rib.Rew	Currently calculated diameter of the ribbon rewinder	xxx mm
00.22	Lab.ext	External alternativ label sensor at the APSF board. Only with installed APSF board.	Connector open/no label: 0 Label detected: 1
20.01	NN		

Sensor ID	Sensor name	Description	Typical values / Test
	Disp.edge	Dispensing edge sensor Only with XLP 60x Basic dispenser	- No label at the dispensing edge: 0,1 V - Label at the dispensing edge: 4,2 V
48.01	BasicIO	8 bit display; provides information about sensors that are connected to the BasicIO board	00000000 ^[93]
39.01	Peripheral	Display if the peripheral option is available but no peripheral device is selected. Only with Options > Selection > Periph. device = "None".	0,1 V
	Cutter	Cutter sensor, provides feedback on the position of the cutter. Only with Options > Selection > Periph. device = "Cutter".	- Rest position (hole over sensor): 0,1 V - Not rest position (hole not over sensor): 4,2 V
	LTMA TD	End position ("touchdown") sensor at the LTMA applicator. Only with Options > Selection > Periph. device = "LTMA".	- Not end position: 0,1 V - End position: 4,2 V
	Disp.edge	Dispensing edge sensor. Only with Options > Selection > Periph. device = "Dispenser".	- No label at the dispensing edge: 0,1 V - Label at the dispensing edge: 4,2 V
	Ext.rewind	Sensor at the (external) rewinder. Only with Options > Selection > Periph. device = "Rewinder".	
34.01	Ribbon feed	w/o function	---
56.01	8IO 1 ^[94]	8 bit display; provides information about sensors that are connected to the (first) 8IO board	00000000 ^[93]

Overview of sensor-IDs (digits before the point)

The sensor ID provides information about the module function:

ID	Module function
00	CPU board
20	BLDC output stage (e. g. material rewinder)
34	Stepper output stage (Ribbon feed)
39	Stepper output stage (e. g. Cutter)
48	BasicIO

⁹³ Breakdown see following chapters.

⁹⁴ Display only with built-in 8IO board.

ID	Module function
49	Basic USI
55	8IO 3
56	8IO 1
57	8IO 2

BasicIO

Sensor test

48.01 BasicIO
 Value: 00000000






Bit								Meaning
8	7	6	5	4	3	2	1	
							L	OD sensor 1: If a sensor is connected, turning the unwinder 1 causes a change between 0 and 1
						L	—	OD sensor 2: If a sensor is connected, turning the unwinder 2 causes a change between 0 and 1
					L	—	—	
				L	—	—	—	
			L	—	—	—	—	
		L	—	—	—	—	—	
	L	—	—	—	—	—	—	
L	—	—	—	—	—	—	—	1: APSF board connected

8IO 1

Sensor test

56.01 8IO(1.)
 Value: 00000000






Bit								Connector	(Input) signal	Meaning for value "1"
8	7	6	5	4	3	2	1			
							L	IO1	app.homepos	Homeposition sensor active
						L	—		app.endpos	Endposition sensor active

Bit								Connector	(Input) signal	Meaning for value "1"
8	7	6	5	4	3	2	1			
					L	—	—		app.touchdown	Touchdown sensor active
				L	—	—	—		app.labelpresence	Label-present-sensor active
			L	—	—	—	—	IO2		
		L	—	—	—	—	—		usi.pause	Pause signal is present
	L	—	—	—	—	—	—		usi.feed	Feed signal is present
L	—	—	—	—	—	—	—		usi.reprint	Reprint signal is present

! The signal assignment for bits 1-4 only applies if a standard applicator is activated and if the selected applicator supplies the relevant signals.

The signal assignment for bits 5-8 only applies with one of the settings Options > Selection > 8IO 1 > USI Emulation= "Standard" or "Reduced".

Gap sensor adjustment

The specified value range is to be understood as a guide value.

- Set power levels for punch/label so that the difference between the power levels is at least 50, generally "as much as possible".

Material end sensor adjustment

- Set power level so that there is a change between 0.0 V (without material) and 5.0 V (with material).
- Reduce power level by 3%.

PRINT HEAD IDLE ADJUSTMENT

About this task

The print head idle position must be readjusted after all parameter values have been deleted (Boot menu, Set to default > All passwords). Depending on the firmware version installed, the machine will then behave differently:

- Up to BEL-V7.0: After deleting all parameter values, the value for the printhead idle position is set to 0 (too low). The user must know that he must reset the printhead idle position.
- From BEL-V8.0: After deleting all parameter values, the value for the print head idle position is set to +31 (too high). An error message appears after the restart:

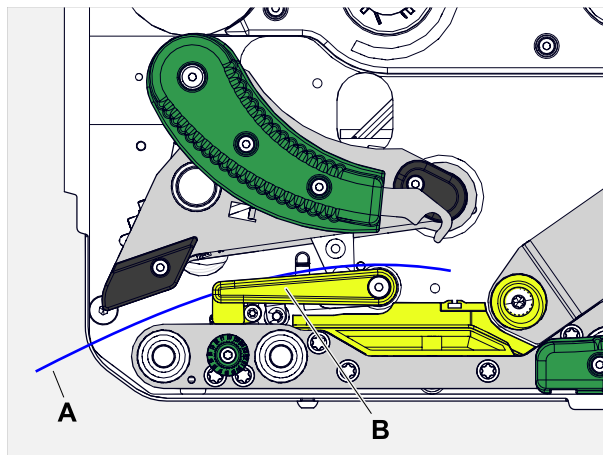
```
Status num: 9057  
Adjust head idle position
```

and thus the information for the user that he must readjust the print head idle position.

! The error message only follows the value +31.

Procedure

1. Remove label stock and ribbon from the print module.
2. Remove the labels from a piece of label material approx. 10 cm long. Place the backing material (A) between the print head and the print roller:



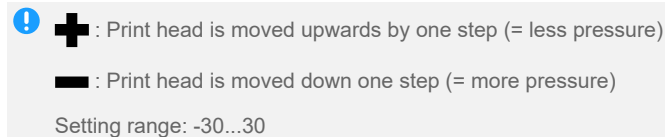
! Place the backing material over the material pressure unit (image above, B). The backing material must *not* be clamped by the pressure rollers.

3. Close the print head pressure lever.

- Open parameter Tools > Adjustment > Head idle adjust. Display:



At the same time the print head moves to the print position.



- Set the setting value ("Head Idle Value") to +30 using the **+** key.
- Reduce the setting value step by step using the **-** key. Push the backing material in and pull it out at each step.
- Repeat the previous two steps until the backing material can no longer be pushed in. The correct setting value is now reached.
- Press the **✓** key to save the setting.
- Open the print head pressure lever and remove the backing material.

SETTING THE CLEAR LABEL SENSOR

Dynamic teaching of the integrated clear label sensor

Before you begin

Prerequisites:

- XDM 94x or XPM 94x with integrated clear label sensor
- Firmware at least BEL-V8.0
- The installed BasicIO- or Basic-USI board is equipped with an STM32 processor

! Test whether the (here: BasicIO)board is equipped with an STM32 processor:
 ► Call Info > System > BasicIO > Module name:

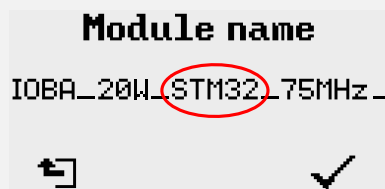


Fig. 73: (Example BasicIO)The module name contains "STM32" (red circle), i.e. the test result is positive.

About this task

The clear label sensor must be taught before first use and after every change of material.

! The process described here is also known as dynamic teaching. Dynamic teaching takes place over several labels and is the recommended procedure.

Procedure

1. Insert label material into the machine.

- ! Make sure,
- that the label web is slightly tensioned
 - that the label web is placed within the detection area of the sensor fork:

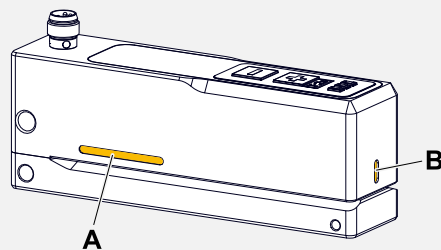
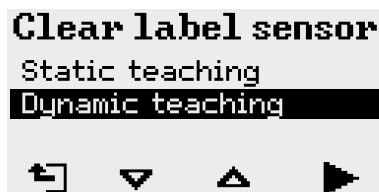


Fig. 74: Markings (A, B) of the detection area of the sensor fork.

2. Call parameter Options > Label Sensor > Clear label sensor > Dynamic teaching:



3. Press the button :
The text "Make sure that the material is inserted correctly" is displayed.
4. Press the button  to confirm the correct position of the label web and to start teaching.

! Don't move the label web.

5. Hold the button  pressed.
 - The yellow LED at the sensor starts flashing fast and
 - the label web is slowly fed forward
6. Release the button  as soon as the yellow LED stops flashing.
 - Teach process successful: yellow LED flashes twice in medium speed
 - Teach process *not* successful: red LED lights up
7. (Teach process successful) Press the button .

8. (Teach process *not* successful) Repeat steps 5 and 6.

! The red LED remains lit until the teaching was successful.

Static teaching of the integrated clear label sensor

Before you begin

Prerequisites:

- XDM 94x or XPM 94x with integrated clear label sensor
- Firmware at least BEL-V8.0
- The installed BasicIO- or Basic-USI board is equipped with an STM32 processor

! Test whether the (here: BasicIO)board is equipped with an STM32 processor:

► Call Info > System > BasicIO > Module name:

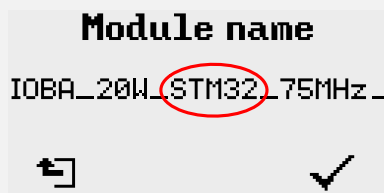


Fig. 75: (Example BasicIO)The module name contains "STM32" (red circle), i.e. the test result is positive.

About this task

The clear label sensor must be taught before first use and after every change of material.

! The process described here is also known as static teaching. Static teaching takes place at just one point on the backing material. It has the advantage over dynamic teaching that no label material is consumed. If label consumption is not important, dynamic teaching is recommended.

Procedure

1. Insert label material into the machine.

- ! Make sure,
- that the label web is slightly tensioned
 - that the backing material is placed within the detection area of the sensor fork:

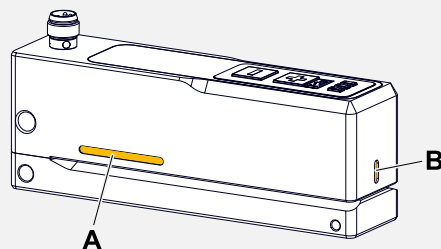
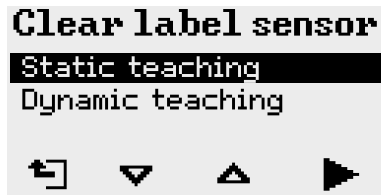


Fig. 76: Markings (A, B) of the detection area of the sensor fork.

2. Call parameter Options > Label Sensor > Clear label sensor > Static teaching:



3. Press the button :

The text "Please place web without a label near the sensor" is displayed.

 This is a request to check whether the backing material is within the detection area of the sensor fork.



4. Press the button  to confirm the correct position of the backing material and to start teaching.

 Don't move the backing material.

The teaching ends automatically after a few seconds.

Results

- Teach process successful: yellow LED flashes twice
- Teach process *not* successful: red LED lights up

What to do next

If the teach process was not successful:

- ▶ Repeat the teach process.

If the adjustment was not successful several times:

- ▶ Start the dynamic teaching.

Dynamic teaching of the external clear label sensor

Before you begin

Prerequisites:

- XDM 94x or XPM 94x with APSF board installed
- Firmware at least BEL-V8.0
- Clear label sensor from NOVEXX Solutions (article no. N104304)

 The sensor must be installed by the customer for the specific application.

- Connection cable for the above-mentioned sensor (article no. N104309)

About this task

The clear label sensor must be taught before first use and after every change of material.

! The process described here is also known as dynamic teaching. Dynamic teaching takes place over several labels and is the recommended procedure.

Procedure

1. Insert label material into the machine.

! Make sure, that...

- the label web runs with even, slight tension over the lower leg of the sensor fork
- the label web is placed within the detection area of the sensor fork:

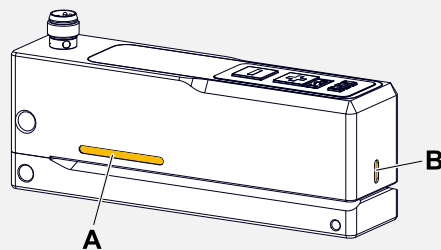
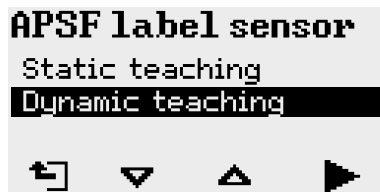


Fig. 77: Markings (A, B) of the detection area of the sensor fork.

2. Call parameter Options > Label Sensor > APSF label sensor > Dynamic teaching:



3. Press the button ►:

The text “Make sure that the material is inserted correctly” is displayed.

4. Press the button ✓ to confirm the correct position of the label web and to start teaching.

! Don't move the label web.

5. Hold the button ►► pressed.

- The yellow LED at the sensor starts flashing fast and
- the label web is slowly fed forward

6. Release the button ►► as soon as the yellow LED stops flashing.

- Teach process successful: yellow LED flashes twice in medium speed
- Teach process *not* successful: red LED lights up

7. (Teach process successful) Press the button ✓.

8. (Teach process *not* successful) Repeat steps 5 and 6.

! The red LED remains lit until the teaching was successful.

Static teaching of the external clear label sensor

Before you begin

Prerequisites:

- XDM 94x or XPM 94x with APSF board installed
- Firmware at least BEL-V8.0
- Clear label sensor from NOVEXX Solutions (article no. N104304)

! The sensor must be installed by the customer for the specific application.

- Connection cable for the above-mentioned sensor (article no. N104309)

About this task

The clear label sensor must be taught before first use and after every change of material.

! The process described here is also known as static teaching. Static teaching takes place at just one point on the backing material. It has the advantage over dynamic teaching that no label material is consumed. If label consumption is not important, dynamic teaching is recommended.

Procedure

1. Insert label material into the machine.

! Make sure, that...

- the label web runs with even, slight tension over the lower leg of the sensor fork
- the backing material is placed within the detection area of the sensor fork:

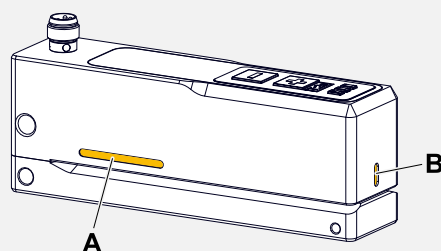
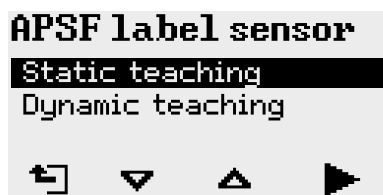


Fig. 78: Markings (A, B) of the detection area of the sensor fork.

2. Call parameter Options > Label Sensor > APSF Etik. Sensor > Static teaching:



3. Press the button :

The text “Please place web without a label near the sensor” is displayed.

 This is a request to check whether the backing material is within the detection area of the sensor fork.



4. Press the button  to confirm the correct position of the backing material and to start teaching.

 Don't move the backing material.

The teaching ends automatically after a few seconds.

Results

- Teach process successful: yellow LED flashes twice
- Teach process *not* successful: red LED lights up

What to do next

If the teach process was not successful:

- ▶ Repeat the teach process.

If the adjustment was not successful several times:

- ▶ Start the dynamic teaching.

Calibrating the clear label sensor

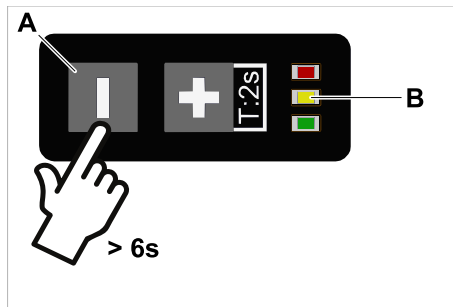
About this task

The calibration must be carried out when the sensor has been cleaned and disassembled for this purpose.

Procedure

1. If available: Remove the label web from the sensor fork.

2. Press the “-” button (A) for at least 6 seconds:



The yellow LED (B) lights up.

3. Release the “-” button.

Results

After successful calibration, the red LED lights up twice.

! Once the sensor has been calibrated, the sensor is adjusted to the mechanical position of the upper and lower part. This may result in process values that differ from the factory setting. It is not possible to reset the adjustment to the factory settings.

Related tasks

Cleaning the clear label sensor (intensively) on page 256

Appendix

APPLIED LICENCES

Open Source Software

This print & apply system uses open source software. A directory of the used software libraries and licenses is stored in the machine and can be downloaded via web browser.

Enter the following address in the web browser:

`http://<hostname>/licenses.zip`



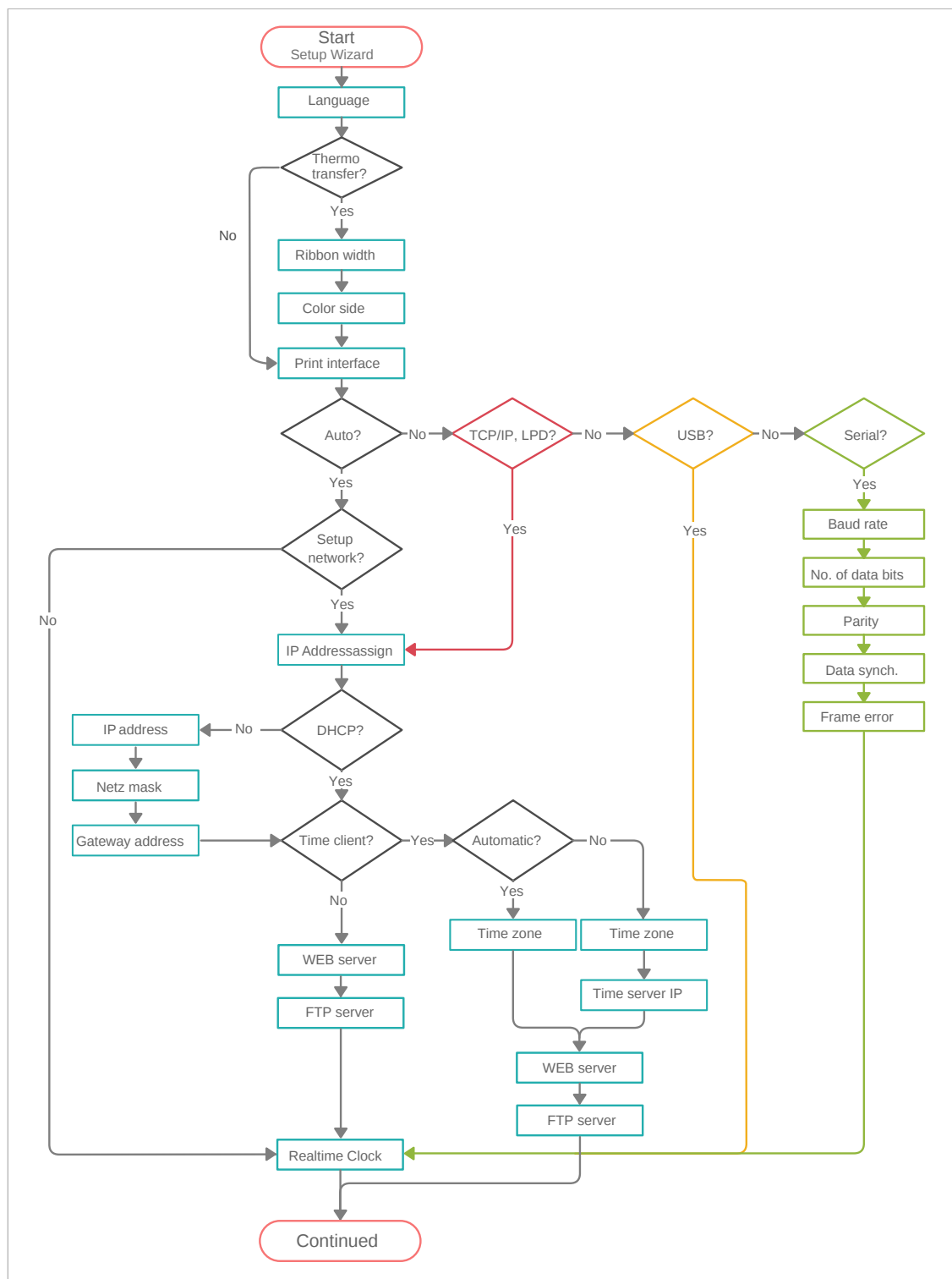
<hostname> = Hostname or IP address of the machine

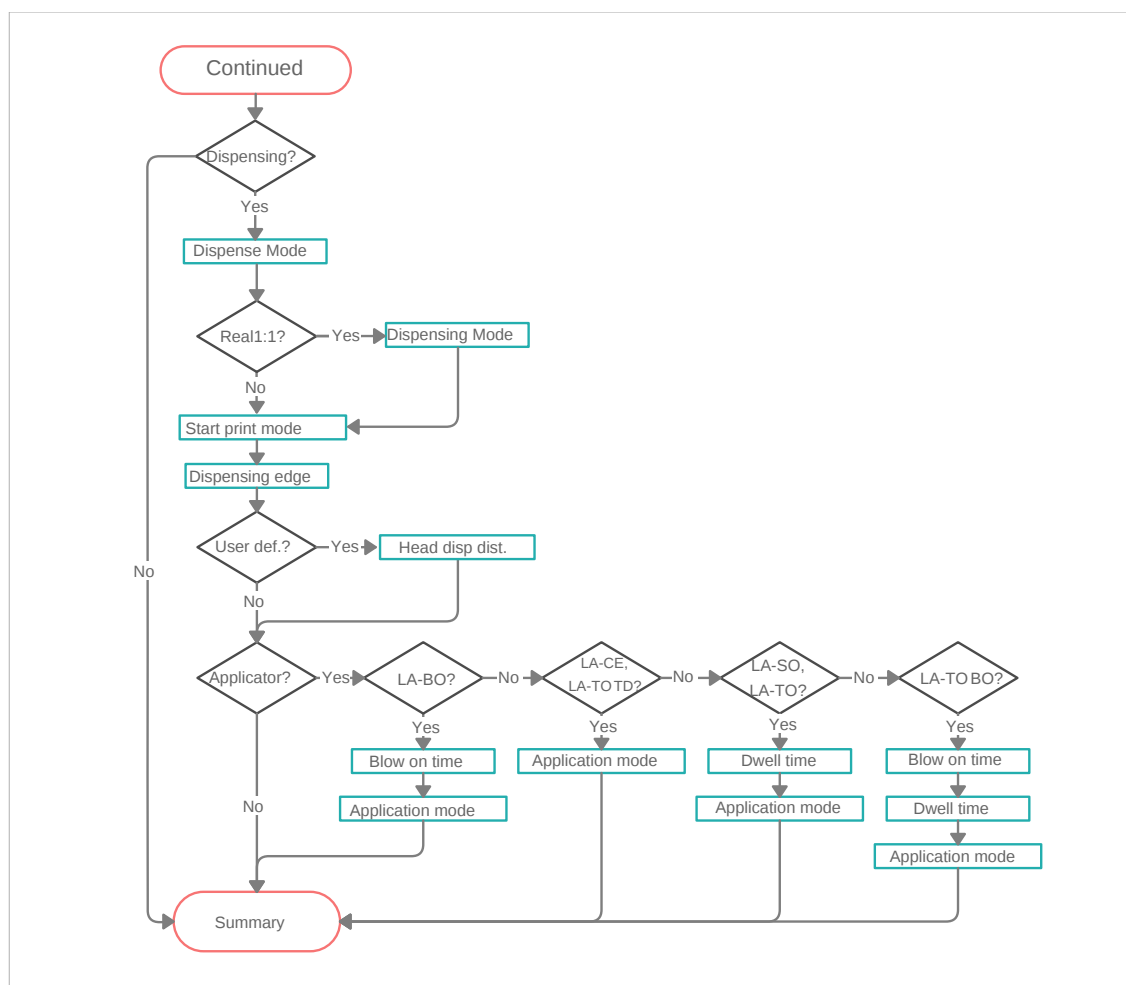
The web server must be activated (Interface > Network > Services > WEB server = "On").

The file `licenses.zip` contains a number of subdirectories, each named after a used software library. Each subdirectory contains the open source license relevant for the respective software.

OVERVIEW SETUP WIZARD

Overview of the parameters queried by the setup wizard.





KEY COMBINATIONS AND KEY CODES FOR SERVICE

The keys are numbered from left to right: 1=key far left; 4=key far right

Key combi.	When	Purpose
1 + 2 + 3	Anytime	Machine reset
1 + 3 + 4	Display "Home"	Code request for the user role
2 + 3	Display "Ready"	Acknowledging a USI warning
3 + 4	During startup	Code request for the user role.
1 + 4		Opens the menu for deleting passwords or parameters
1 + 3 + 4		Starts machine with deactivated motion control

Table 34: Key combinations.

Role	Access code	Rights
Operator	1-1-3-2	• <i>Parameter menu</i>: Access is limited to the Info menu • <i>Web panel</i>: Access to parts of the “Production” and “Machine settings” view • <i>Ftp access</i> to machine memory: read-only
Supervisor	2-2-3-1-2-2	• <i>Parameter menu</i>: Access to all parameters except service parameters • <i>Web panel</i>: Access to the “Production” view, parts of the “Machine settings” view and the “Administration” view • <i>Ftp access</i> to machine memory: Read and write access rights
Service	1-2-3-1-2-2-2	• <i>Parameter menu</i>: Access to all parameters • <i>Web panel</i>: Full access to “Production”, “Machine settings” and “Administration” views • <i>Ftp access</i> to machine memory: Read and write access rights

Table 35: Permitted roles, their access codes and the associated rights.

Access code	Purpose
4-2-1-2	Clear parameters
2-1-2-4	Clear access codes (“passwords”)
1-2-4-2	Assigning board address

Table 36: Access codes for clearing settings.

MQTT SUPPORT

! The MQTT support is still in beta stage, i.e. there will still be changes to the function.

MQTT (Message Queuing Telemetry Transport) is an open OASIS and ISO standard (ISO/IEC 20922) protocol for the Internet of Things. It is designed as a lightweight, publish-subscribe network protocol that transports messages between devices. The protocol usually runs over TCP/IP; however, any network protocol that provides ordered, lossless, bi-directional connections can support MQTT. It is designed for connections with remote locations where a “small code footprint” is required or the network bandwidth is limited.

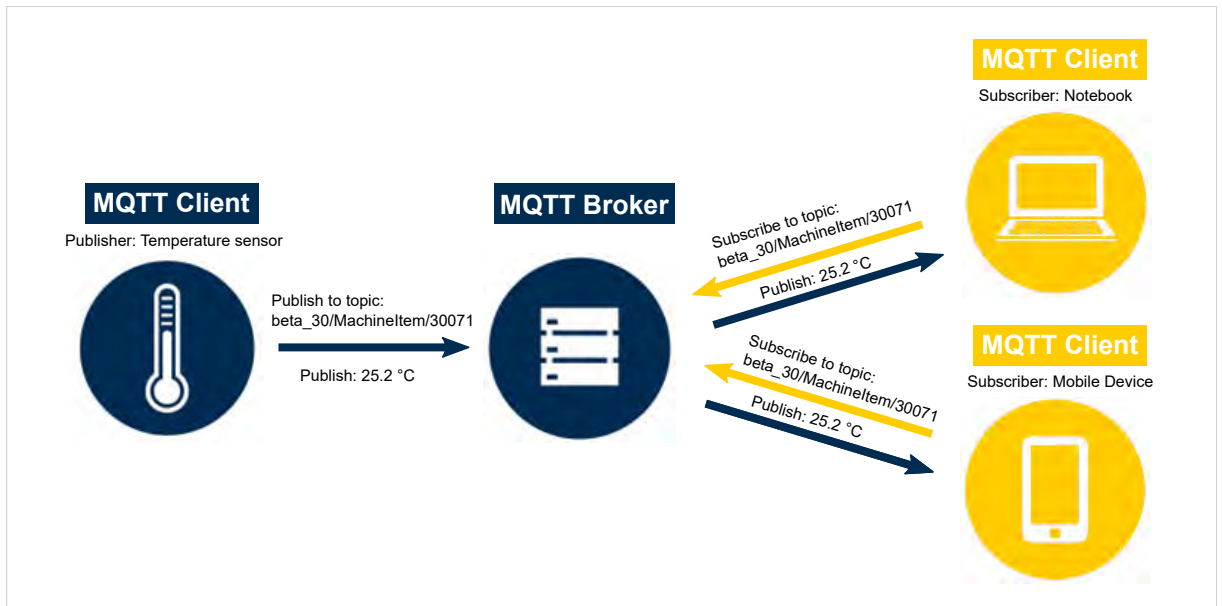


Fig. 79: The MQTT broker transmits the data (topics) to the client.

Activating the MQTT broker

Activating the internal broker:

- Interface > Network > Services > MQTT broker = “Internal server”

Activating the external broker:

- Interface > Network > Services > MQTT broker = “External server”
- Interface > Network > Services > MQTT broker IP = “xxx.xxx.xxx.xxx”

Publishing data

All Machine internal parameters are published, if MQTT is enabled. Always, if a value of a specific parameter is changed, the new value is published to the MQTT broker.

The parameters are selected by their IDs. The parameter IDs can be found, for example, in the machine's setup file (`setup.for`) or in the appendix of the service manual.

Example (statistical data from `setup.for`):

```

#G-----
#G Info ► Statistics
#G-----
#G readonly ID=30018 #G Head run length : 4 m
#G readonly ID=30019 #G Roll run length : 5 m
  
```

```
#G readonly ID=30024      #G Total head moves : 11
#G readonly ID=30014      #G Serv. operations : 0
#G readonly ID=30015      #G Head number : 0
```

In addition, there are “invisible” parameters for the current *warning*, the current *error* and the current *info* message. These parameters appear neither in the setup file nor in the parameter menu:

ID	Function	Note
60002	Current error	Indicates errors that need to be acknowledged by the user, e.g.: 5074 Print module open 0000 (After acknowledging; here after closing the print head pressure lever)
60003	Current warning	Indicates errors that are automatically acknowledged (after 2 s) (== warning), e.g.: 1170 X Pos > width 0000 (Error acknowledged)
60004	Last Info	Shows the last info text, e.g.: 0001 Machine started 0002 Machine reset 0003 Machine standby

Subscribing to data

With an MQTT client, data (topics) can be subscribed to by the MQTT broker, i.e. whenever something changes in the subscribed topic on the machine, a message is sent from the broker to the client.

In the following example, the simple client `mosquitto_sub` of the **Mosquitto project** was used.

Example:

The parameters (topics) with the IDs 30071 (Head temperature), 30028 (Operation time), 30019 (Roll run length) and 60002 (Current error) shall be subscribed.

Input in a terminal on a computer connected to the same network where the machine is located:

```
mosquitto_sub -h 192.168.0.149 -t '+/MachineItem/30071' -t '+/MachineItem/30028' -t '+/MachineItem/30019' -t '+/MachineItem/60002' -v
```

! The IP address is that of the MQTT broker. When using the internal broker, it corresponds to the address of the machine; when using an external broker, it is the address of the broker (e.g. 5.196.95.208 for the test broker `test.mosquitto.org`).

If the parameter `-v` is omitted at the end of the input line, only the respective value of the topic appears.

Subscribing to all of the topics:

```
mosquitto_sub -h 192.168.0.149 -t '#' -v
```

Reply of the broker:

```
beta_30/MachineItem/30071 25.2 °C
beta_30/MachineItem/30028 0 hours 0 min
beta_30/MachineItem/30019 105 m
beta_30/MachineItem/60002 0000
beta_30/MachineItem/30028 0 hours 1 min
beta_30/MachineItem/30028 0 hours 2 min
beta_30/MachineItem/60002 5074 Print module open
beta_30/MachineItem/60002 0000
beta_30/MachineItem/30028 0 hours 3 min
...
```

Each line of the reply consists of a topic and a value and has the following structure:

<hostname>/MachineItem/<ParameterID> <Value>		
Example	Placeholder	Note
beta_30	<hostname>	Host name of the machine, see parameter Interface > Network > DHCP host name
	MachineItem	Fix text
30071	<ParameterID>	ID of the parameter
25.2 °C	<Value>	Value of the subscribed topic

XAPPS

What is it?

XApps is a feature that enables customized programming. XApps are compact JavaScript programs which are stored in the internal memory and interact through the JS API with the main firmware. XApps can be thought of as extensions of the basic functionality.

XApps are running on standard JavaScript engine **Node.js** (v12.22.2), which is part of the Linux image on all Linux-based Novexx machines.

API (Application Programming Interface)

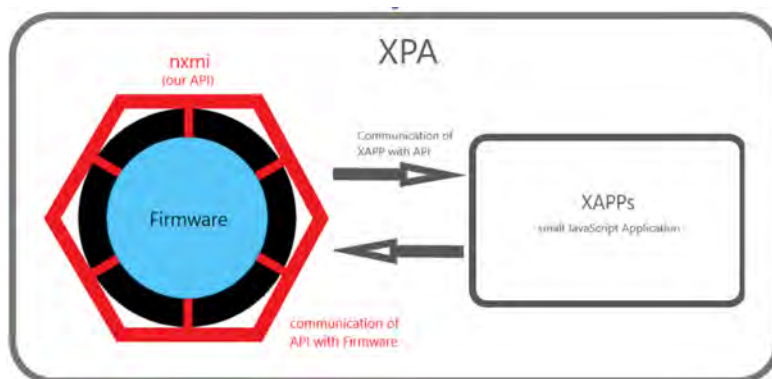
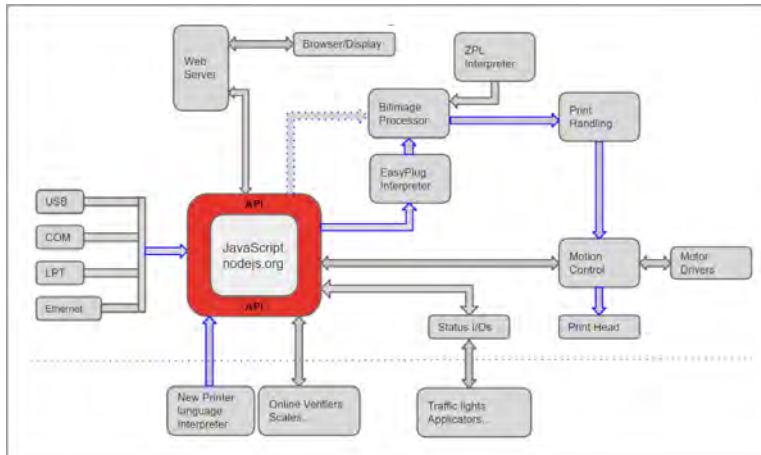


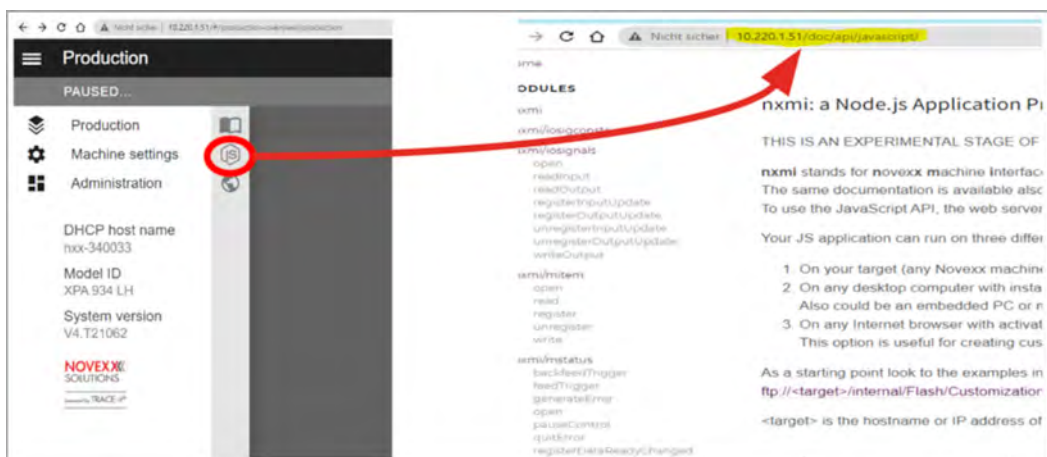
Fig. 80: Novexx API : nxmi (novexx machine interface)

API Architecture



Nxmi documentation

“nxmi” is the Novexx API. The nxmi documentation can be found within the web panel:



 The documentation is intended for JavaScript programmers.

Example scripts can be found in the internal machine memory in `internal/Flash/Customization/apps`.

 **Video: Webinar “XApps programming”**

DECOMMISSIONING, DISMANTLING, DISPOSAL

Take the machine out of operation

- Disconnecting the machine from the *compressed air* supply (only machines with installed applicator):
 - ▶ Switch off the compressed air supply of the applicator.
 - ▶ Disconnect the compressed air hose from the applicator.
- ! For details read the applicator installation manual.
- Disconnect the machine from the *power supply*:
 - ▶ Switch the machine off at the mains switch (switch position "0").
 - ▶ Pull out the mains plug from the mains socket.

Dismantling the machine

- ▶ Disconnect all external cables at the machine.
- ▶ Remove machine parts which can be reused (e. g. applicator, material unwinder, dispensing edge holder, dispensing edge, interface boards).

**WARNING!**

Danger of injury by the machine falling to ground.

- ▶ Let the machine be hold by at least 2 persons, while a 3rd person loosens the clamping at the support stand.
- ▶ Wear safety footwear.

**WARNING!**

Acute risk of injury and long-term bodily injury from working with heavy loads.

- ▶ Lift or carry the machine with a minimum of 2 persons. If possible, use a crane or other lifting device.

- ▶ Let the machine be held by at least 2 persons, while a 3rd person loosens the clamping at the support stand.

! While doing so, hold the machine at its housing.

- ▶ Strip the machine from the support stand tube and lay it down.

Machine disposal

! For reasons of sustainability and environmental protection, the machine should only be disposed of if it can no longer be repaired - because it is irreparably damaged or because spare parts are no longer available due to its age.

- ▶ Dismantle the machine and recycle or dispose of the machine parts separately according to material groups. Observe the national regulations.
- ▶ (Alternative) Commission a specialist disposal company with the disposal.

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