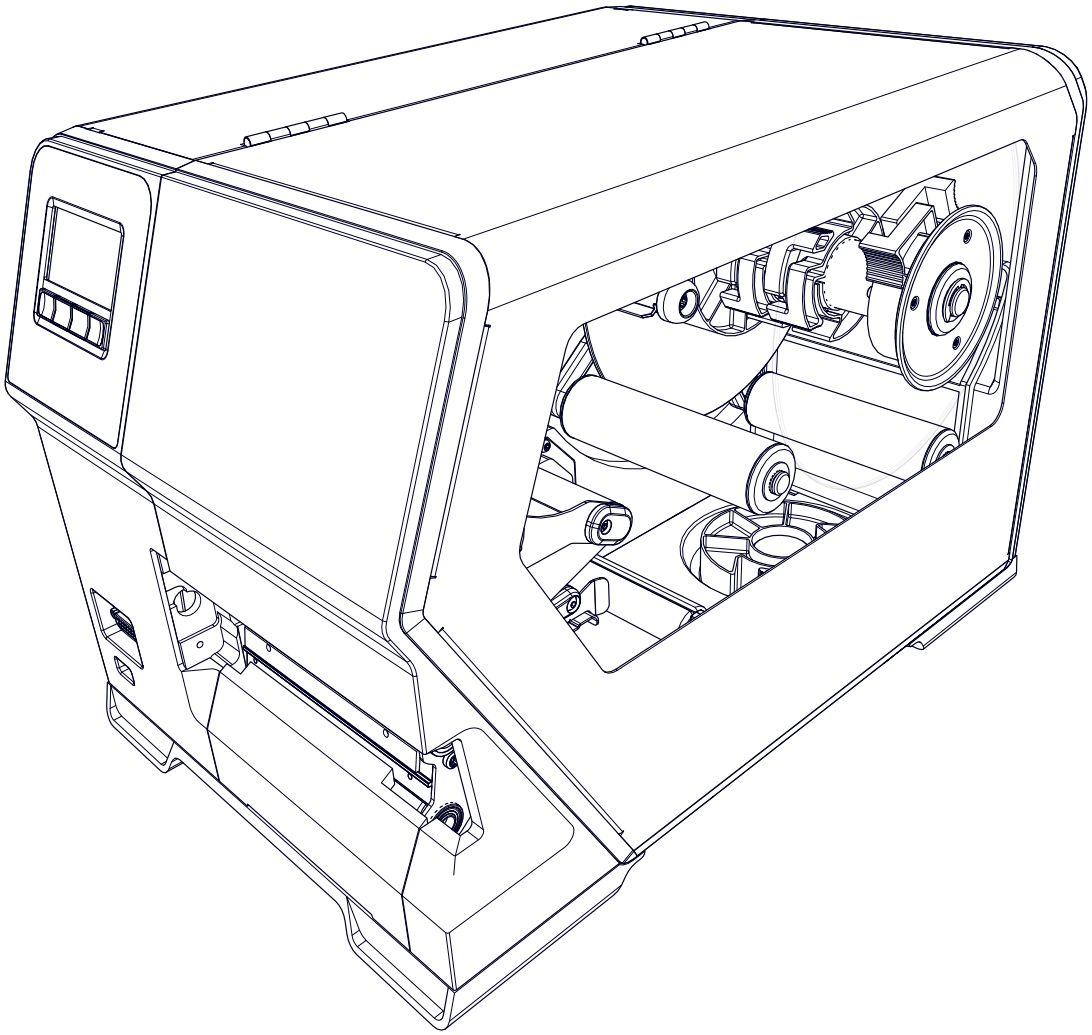
NOVEXX SOLUTIONS

SERVICE MANUAL

XLP 604/605/606

Label printer



Edition 5 - 8/2022

Contents

Please note!

GENERAL NOTES

Validity of this manual and required compliance

Contents

The complete operating manual for the label printers XLP 604, XLP 605 and XLP 606 (referred to in the following as “XLP 60x”, “machine” or “printer”) consists of the following parts:

Manual	Target group	Medium	Availability
Quick reference guide, Safety notes	Operating personnel	Printed	Comes with machine
User manual		PDF file	NOVEXX Solutions website www.novexx.de
Service manual	Service personnel		NOVEXX Solutions Partner Portal www.novexx.com
Spare parts catalogue			

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

Technical release

Technical release: 7/2022

Software version: BEL-V4.1

Liability

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

For Information about the required qualification, refer to chapter Qualifications required on page 9.

Copyright

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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!

‖ Special note for action that must be performed. ‖

- Enumeration of features
- Other feature

EXPERTS 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

Reference to illustration	Application
(see fig. above, pos. A)	• Several illustrations • Position number(s) in the illustration

Table 1: Differenet references to illustrations.

Parameters

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

SAFETY INSTRUCTIONS

Intended use

The label printers of the XLP 60x series are designed for printing label material, using the thermal or thermal transfer printing process. In addition, the dispenser version of the printers can dispense self-adhesive labels and can rewind the remaining backing paper (ar alternatively the complete label material). It is possible to use a wide range of label materials and thermal transfer ribbons. Label stock must be in roll shape or fan-folded. The label web can optionally be pulled-in from outside the printer through the slots in the rear side or bottom plate.

Observe the technical specifications of the printer, see chapter Technical Data on page 11. Any other type of or more extensive application will be considered *abnormal use*.

Operating position: The XLP 60x is a desktop printer. The intended use position is as shown standing on a firm, flat, horizontal surface (e.g. on a table).

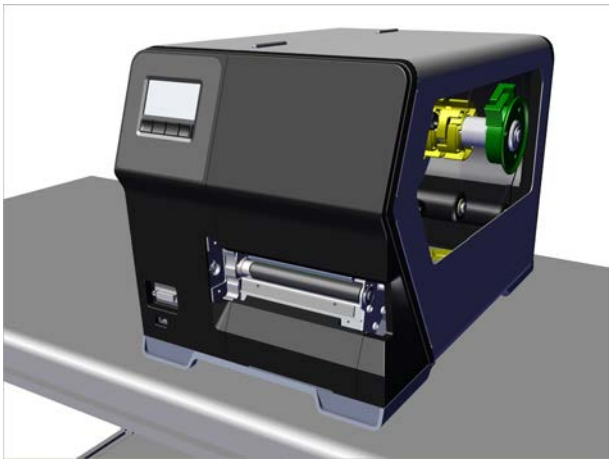


Fig. 1: Operating position of the XLP 60x.

NOVEXX Solutions shall assume no liability for damage resulting from non-intended use of the machine.

Safety notes

Follow the instructions

Safe and efficient operation of the printer can only be guaranteed if you observe all necessary information.

- Before operating the printer, read the operating instructions and all other notes carefully.
- Observe the additional safety and warning notes on the printer.

Qualifications required

- Trained staff is required for inserting and changing foils and material.
- Users need to be instructed in the use of the printer so they can work safely and independently.
- Users should be able to resolve minor operational issues and faults by themselves.
- At least two users should be instructed.

Requirements for safe operation

- Only use the printer in enclosed areas with environmental conditions matching the values given in the technical specifications!
- Only operate the printer on a plane, solid support.
- Make sure that the power supply socket for the printer is readily accessible!
- Only trained and authorized personnel should operate the printer!
- During operation, the print head can become hot! Care should be taken when touching the print head!
- Do not make any modifications or any additional casing for the printer!
- Do not allow any liquids to enter into the printer!
- Repairs to the printer may only be performed by authorized specialists who are aware of the risks involved!
- Lay the power supply cable, data cables and compressed air hoses (if applicable) in a way that nobody can stumble over it.
- In case of emergency, switch off the printer and disconnect the power supply cable!
- Only use original accessories!

Protection against injuries by electrical current

- Only operate the printer using the system voltage indicated on the nameplate!
- Only connect the printer to a grounded power socket fitted to authorized standards!
- Connect only devices to the interfaces at the printer that fulfil ES1 circuit requirements according to EN 62368-1!

Protection against injuries by mechanical action

- Only operate the printer when the cover is closed!
- Don´t wear *loose* long hair (if necessary, wear a hairnet).
- Keep loose jewellery, long sleeves, etc. away from rotating parts of the printer!

- Be careful when sliding on/removing the ribbon rolls! There are *sharp-edged clamping plates* on the ribbon mandrels. Danger of cuts!

Warning notes on the machine

> CAUTION!
> Warning notes on the machine provide important information for the operating personnel.
> ► Do not remove warning notes.
> ► Replace missing or illegible warning notes.

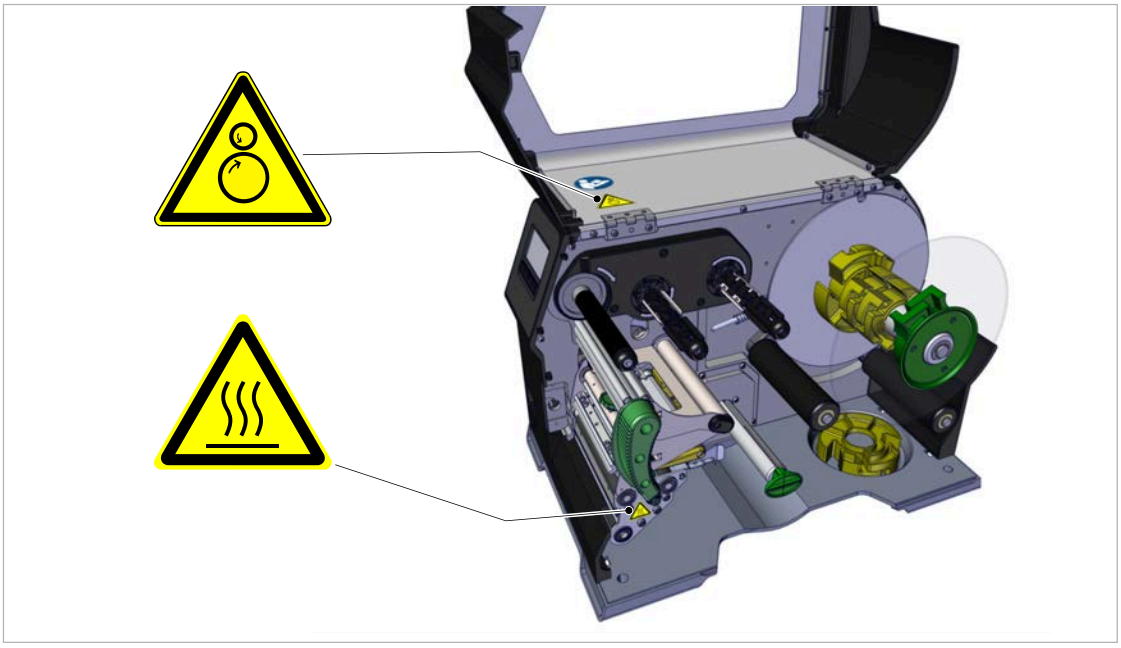


Fig. 2: Warning note on the XLP 60x.

Warning note	Meaning	Article no.
	The “Pinch point” warning note warns of the danger posed by the machine´s rotating parts; they can trap items and draw them in.	A5346
	The “Hot surface” symbol warns of a burn hazard if the surface is touched. Allow the machine to cool off before touching it.	A5640
	The blue label “Read manual” demands that operators read the user manual.	A5331

Product Description

TECHNICAL DATA

Dimensions | Connection Data | Ambient Conditions

Dimensions

- Measures:
  - *XLP 604*: 496 x 312 x 330 mm
  - *XLP 605/606*: 496 x 377 x 330 mm
- Weight:
  - *XLP 604 "Basic"*: 18.6 kg (w/o options)
  - *XLP 605/606 "Basic"*: 19.6 kg (w/o options)

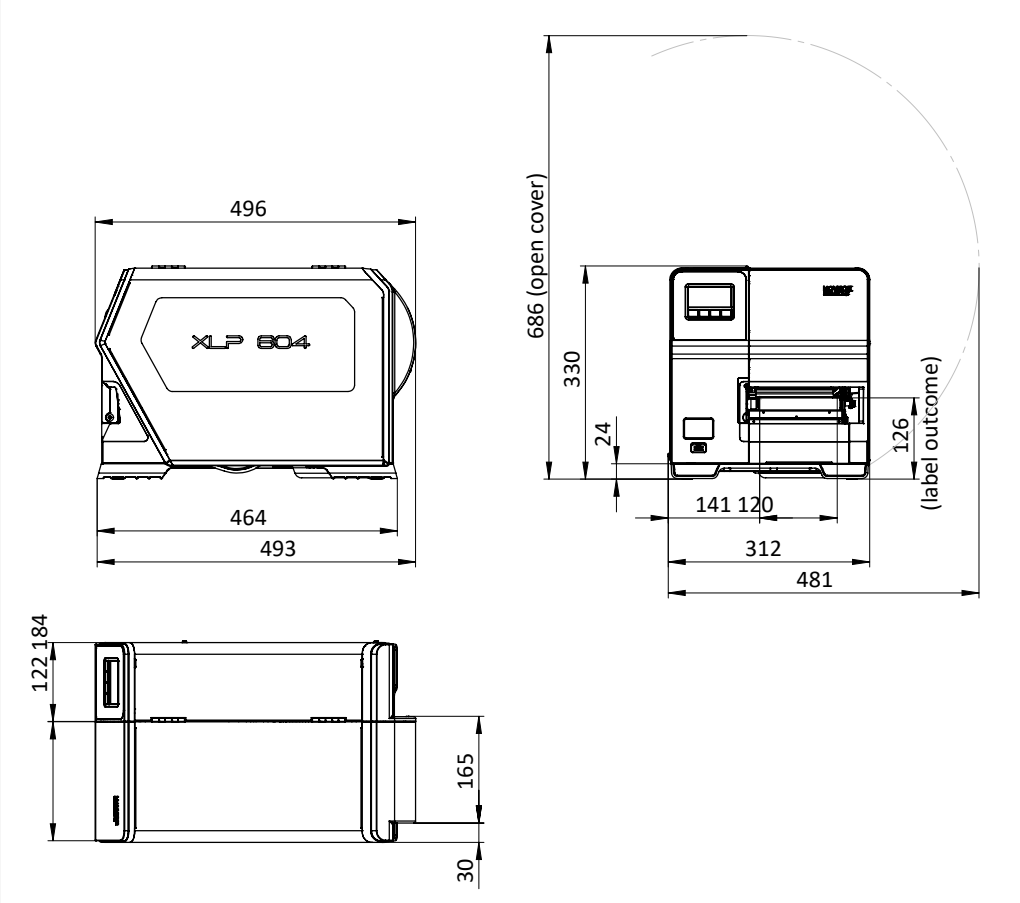


Fig. 3: Measures of the XLP 604.

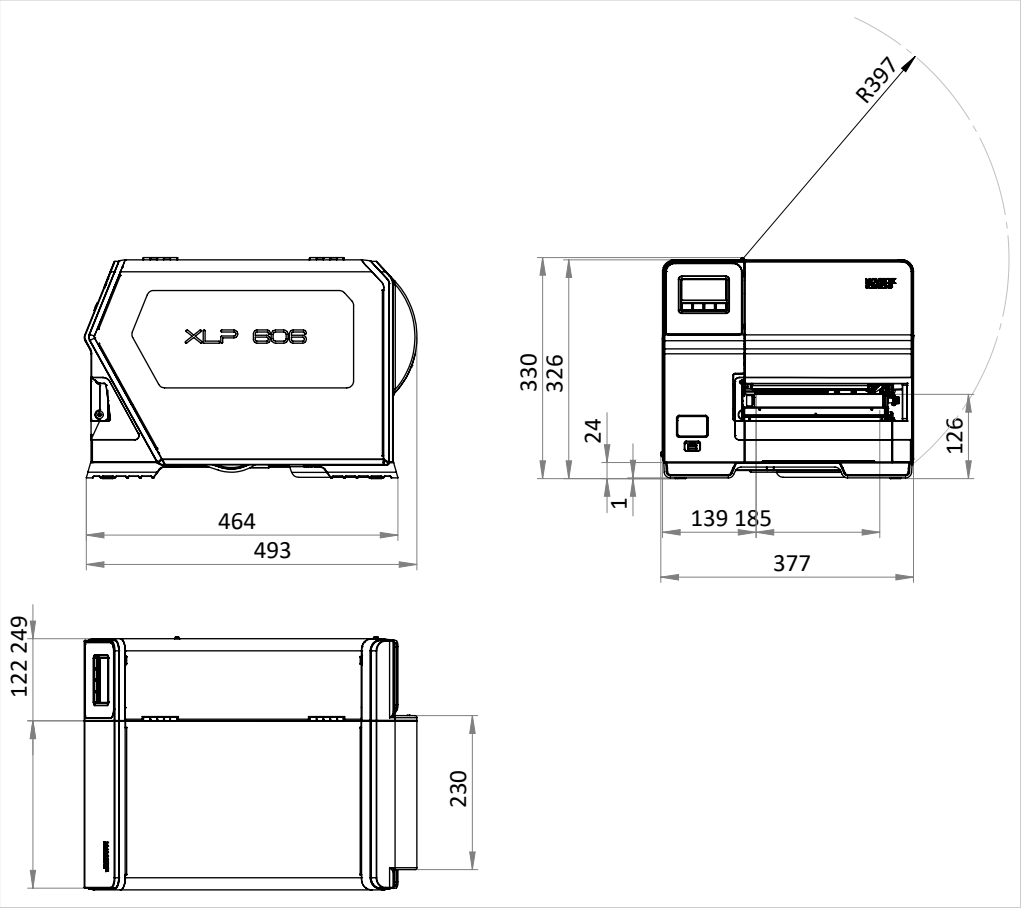


Fig. 4: Measures of the XLP 605/606.

Connection data

Protection category	I
Mains voltage	100 -240 V (AC)
Mains frequency	60 /50 Hz
Input current	max. 3.9 A
Power consumption	max. 456 W

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	70 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, card and synthetic materials, suitable for printing in thermal direct process and thermal transfer process. Use of roll material or leporello possible.

For details refer to Appendix > “Types of label material”.

Material weight

- Self-adhesive: 60-160 g/m^2
- Cardboard: max. 240 g/m^2

Material measures

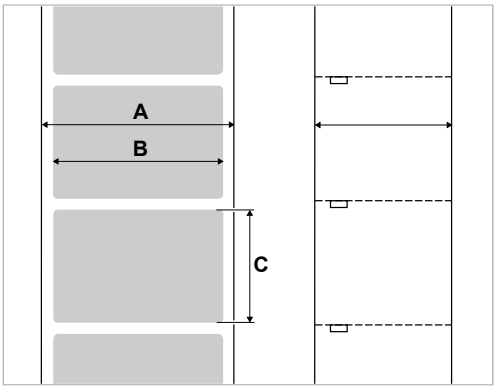


Fig. 5: Material measures (**A** Material width, **B** Label width, **C** Label length)

Machine	Material width	Label length
XLP 604	15-120 mm	5-2000 mm
XLP 604 Dispenser	30-115 mm	30-500 mm
XLP 605/606	50-185 mm	5-2000 mm
XLP 605/606 Spender	50-180 mm	30-500 mm

Table 2: Label measures.

Label roll

Max outer-Ø	210 mm
Inner-Ø	38.1 / 76.2 / 101.6 mm (1.5 / 3 / 4“)

Backing paper

Max. roll Ø rewound backing paper: 105 mm

Punch measures

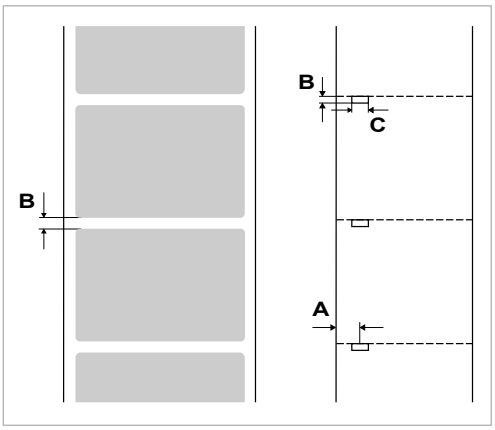


Fig. 6: Punches at different material types (**A** Punch position, **B** Punch length, **C** Punch width).

Machine	Punch position	Punch length	Punch width
XLP 60x	2-60mm	0.8-14 mm	min. 4 mm

Table 3: Punch measures

Thermal transfer ribbon

Specifications of suitable 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 12 inch/sec. (300 mm/s).

Ribbon roll

Variable	Dimension
Outer Ø	max. 105 mm
Length	max. 600 m
Core inside Ø	25.4 mm (1“)

Variable	Dimension
Width [1]	XLP 604: 25-110 mm XLP 605: 25-132 mm XLP 606: 25-164 mm

Table 4: Dimensions of usable ribbon rolls.

Perfomance 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)
XLP 604	12.0	300	106
XLP 605			128
XLP 606			160

Print speed

Machine	Print speed (mm/s)	Print speed (inch/s)
XLP 604	75-400	3-16
XLP 605	75 -400	3-16
XLP 606	75 -350	3-14

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 ±1% of this distance to the accuracy fault (fig. below)

- X-direction: ± 0.5 mm

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

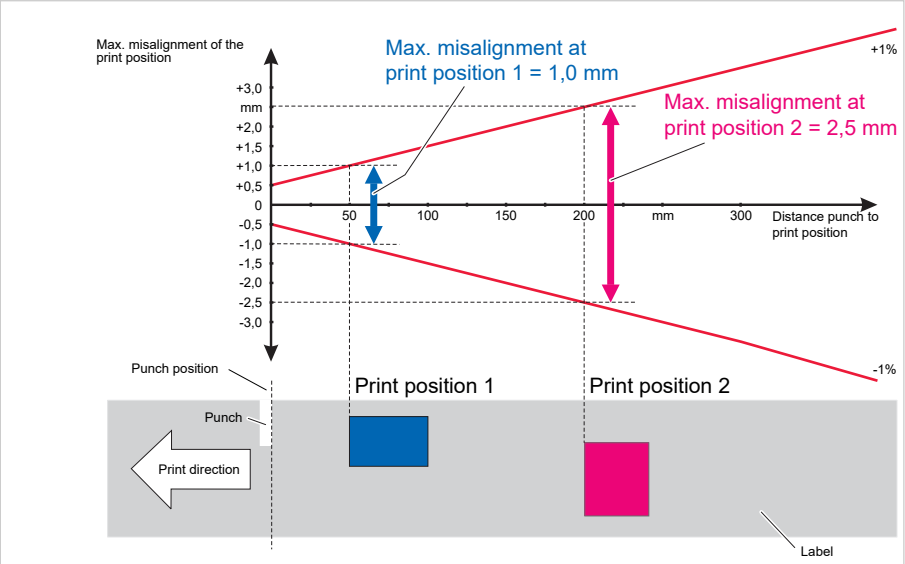


Fig. 7: Impression accuracy in printing direction, depending on the printing position.

Label sensor

- Standard: *Light-transmission* sensor for punched label material
- Option: *Reflex* sensor for label material with black marks on the bottom side
- Setting range: 2-60 mm (distance to lay edge)

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

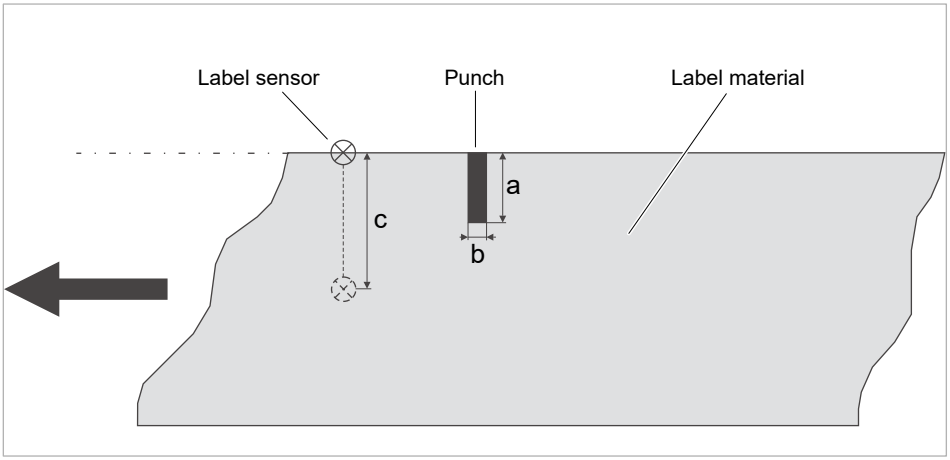


Fig. 8: Adjustment range of the label sensor.

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 a memory card.

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

Data Matrix Code (code according to ECC200)
Maxi Code
PDF 417

Codablock F
Code 49
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, 2x rear, 1x front
  - *USB device* (Typ B): USB 2.0
  - Serial: RS232, DSub 9

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 • LC graphics display with 128x64 pixels • RGB illuminated background

Certificates and Markings

CE, TÜV-Mark, $_{C}$TÜV$_{US}$ -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.“

OPERATING PANEL

Operating Controls

The operation panel of the XLP 60x 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.

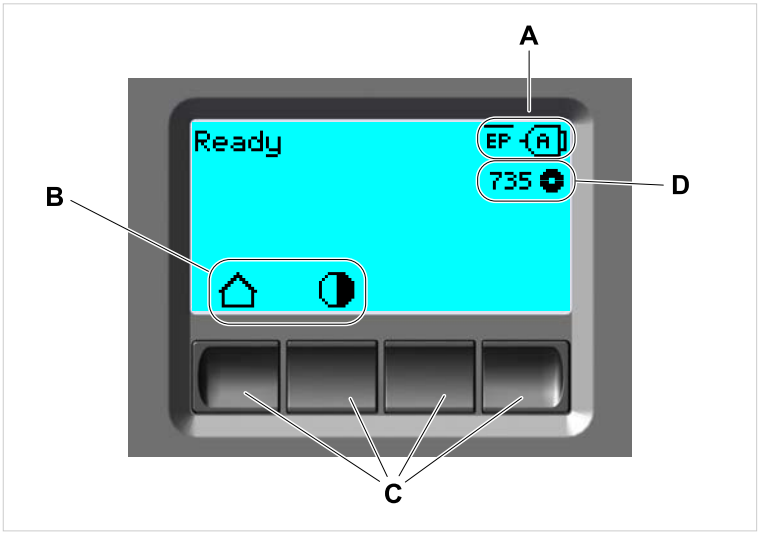


Fig. 9: Operation panel of the XLP 60x: **A** Icons that inform about the interface assignment, **B** Icons that show the key assignment, **C** Keys, **D** Remaining ribbon stock.

Operating Principle

The figure shows, how to toggle between the screens:

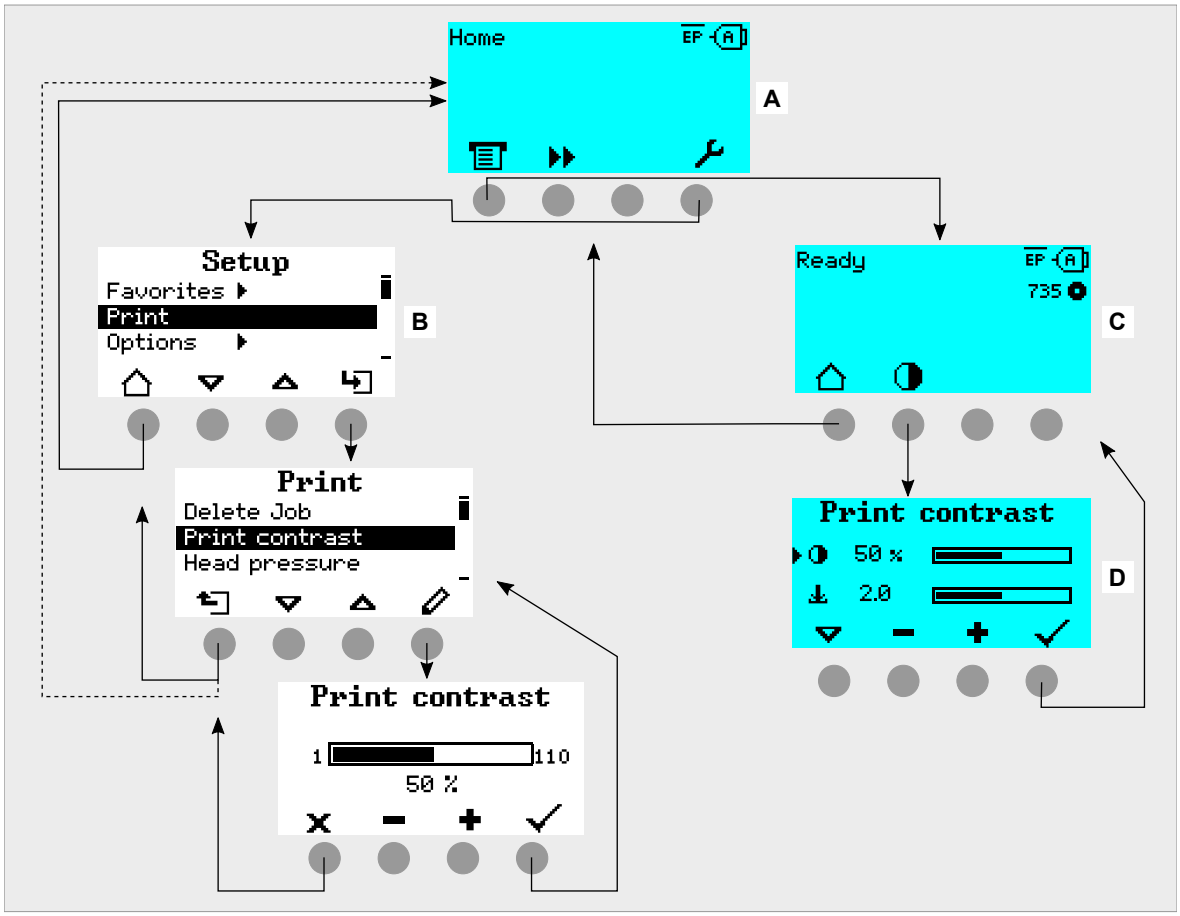


Fig. 10: How to toggle between the screens: **A** “Home” (cyan), **B** “Setup” (white), **C** “Ready” (cyan).

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 *or* • 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 *not* ready to receive print data • The interpreter has stopped • Error messages or warnings can *not* 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

Color	State	
	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 *not* ready to receive print data • The interpreter has stopped • Error messages or warnings can *not* be displayed
Red	Error	• An error occured during the printing • The current print job is stopped • A status message is displayed with red background • The status message only dissappears 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
Yellow	Warning	Same as “Error”, with the following differences: • The current print job is *not* stopped • The warning is displayed with yellow background • The warning dissappears after some seconds

Table 5: Display colors and corresponding states

Icons

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

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

	*Ethernet active*: The network interface is selected for data transfer and a connection could be established [2]		*Ethernet inactive*: The network interface is selected for data transfer and a connection could *not* be established
	*USB*: The USB interface is selected for data transfer [2]		*Auto interface*: The data interface is selected automatically [2]
	*Serial*: The serial interface is selected for data transfer [2]		*Caution*: Warning sign which marks error messages
	*Filter*: The filter function for file names is active (standalone mode)		*Ribbon stock*: Shows together with the number left of it the remaining ribbon length in meters.
	*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “Easyplug” [3]		*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “EasyPlug/ZPL Emu” [3]
	*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “ZPL Emulation” [3]		*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “Lineprinter” [3]
	*Print interpreter* setting: Parameter Printer Language > Print Interpret. is set to “Hexdump” [3]		*USB thumb drive*: A USB thumb drive is connected and assigned to drive C:

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 59
	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.

2 Icon flashes during print data transfer

3 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

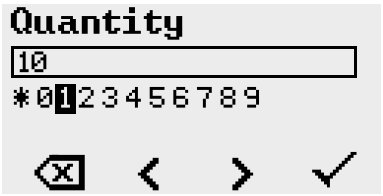
Data entry at the operation panel is required in the following cases, for example:

- 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.



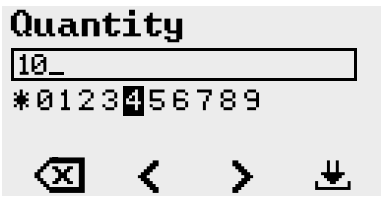
Press the key ✓ to accept the entry unchanged.

Deleting characters:

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

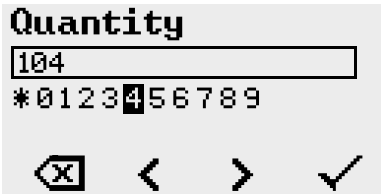
Adding characters:

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 148
Selecting Files from an External Memory Medium on page 134

WEB PANEL

Web panel - what´s that?

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 XPA93x, XDM94x, XPM94x
- Label printers XLP 60x, XLP51x

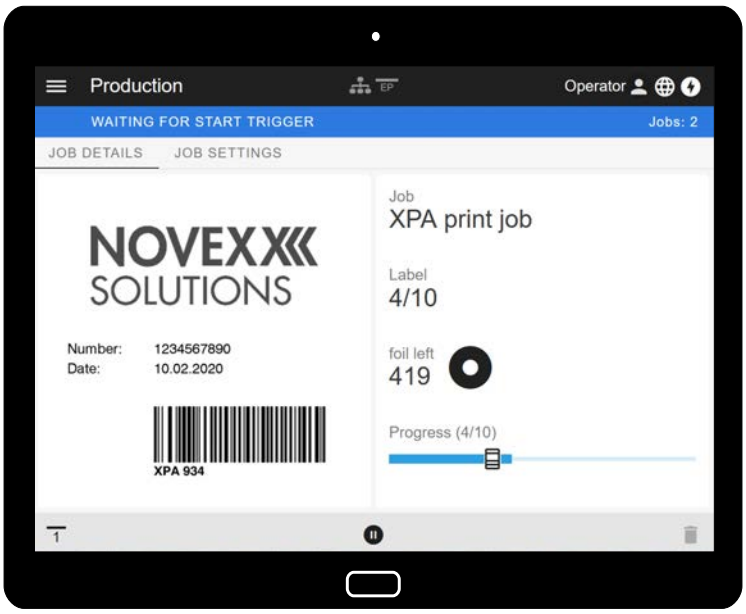


Fig. 11: Display of a print job in process with the web panel on a tablet computer.

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.

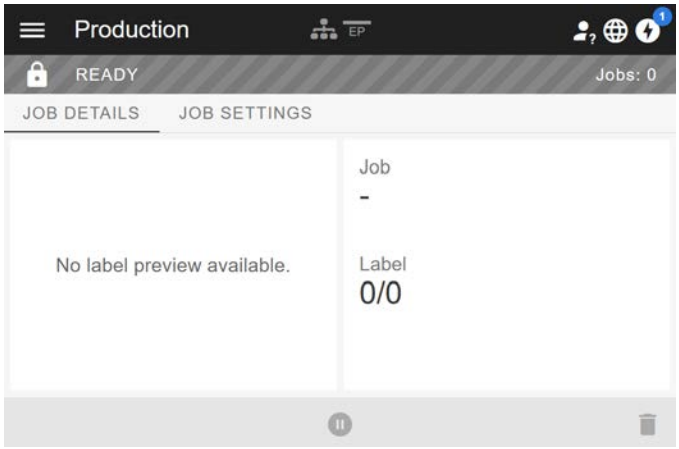
Starting the web panel

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.

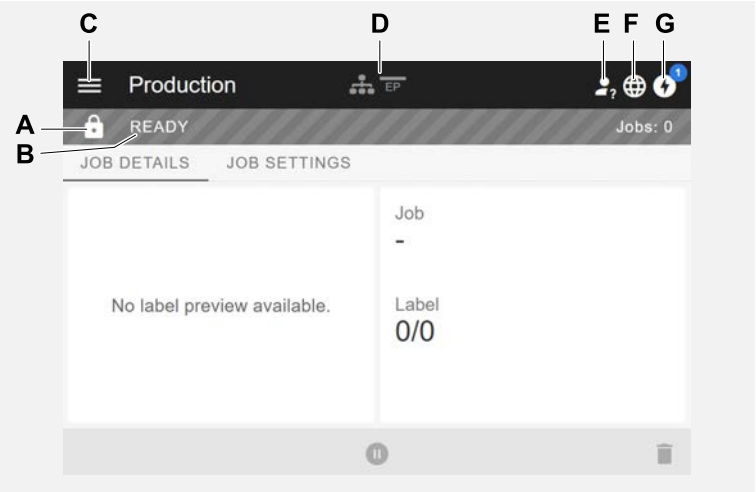
2. Switch on the display device and open the web browser.
3. Enter the IP address in the URL input line of the web browser.
   The following display appears:



Related tasks

Access to the web panel via Wi-Fi on page 155

Display after the start



Pos. no.	Function
A	*Lock symbol*: 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	*Infotext*: 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	*Menu*: Choose here between the views “Production”, “Machine settings” and “Administration”. More details are given in the following chapters.
D	*Icons* 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	*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. ‖ Preset key code for the role Operator: 1-1-3-2 ‖
F	*Language selection*: The language set on the machine is preset. By clicking on the icon, another language can be selected for the web panel.
G	*Notifications*: Display notifications, such as error messages and warnings. See the following chapters for more details.

Notifications

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

Error messages

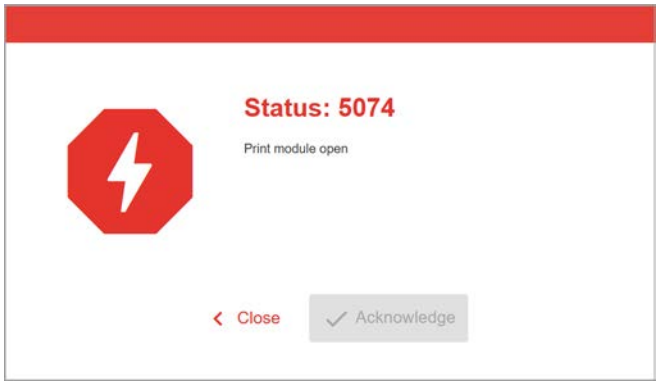


Fig. 12: Error messages that require a reaction from the operator are displayed in full. Status number and status text match the display on the machine operating panel. The message can be confirmed either on the web panel or the machine operating panel.

The Notification View

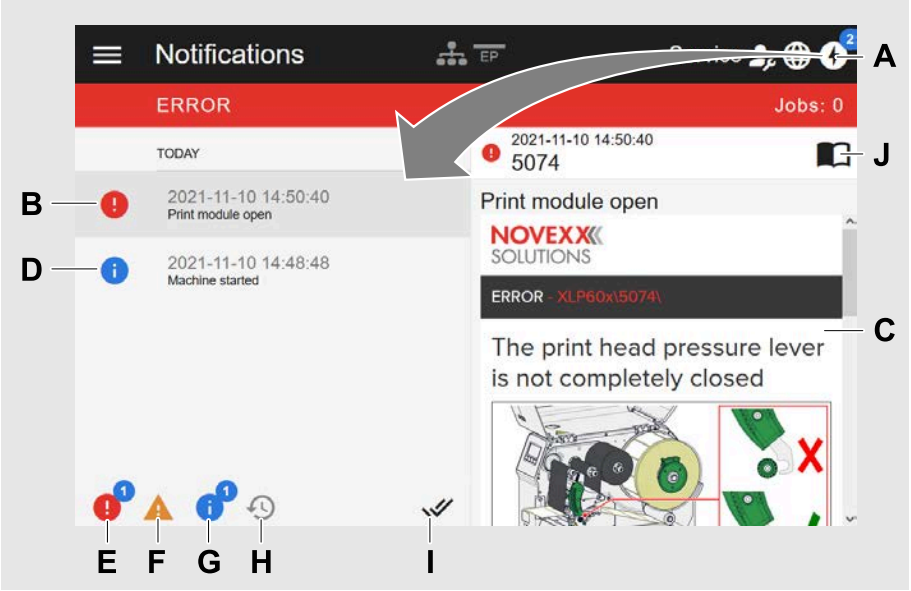


Fig. 13: After clicking on the notification icon (A), the notification view opens. The left half shows the notification history, the right half shows an explanation of the selected entry in the history.

Pos. no.	Function
A	*Notification icon*: Click on the icon to open the notification view. The superscript number indicates the number of unconfirmed notifications.
B	*Error message* 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	*Quick guide* 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	*Info message* in the history with time stamp.

Pos. no.	Function
E	*Filter for error messages*: Click on the icon to hide error messages from the list
F	*Filter for warnings*: Click on the icon to hide warnings from the list
G	*Filter for info messages*: Click on the icon to hide info messages from the list
H	*History*: Click on the icon to display the notification history. The history shows all notifications that have already been confirmed.
I	*Confirm everything*: 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.

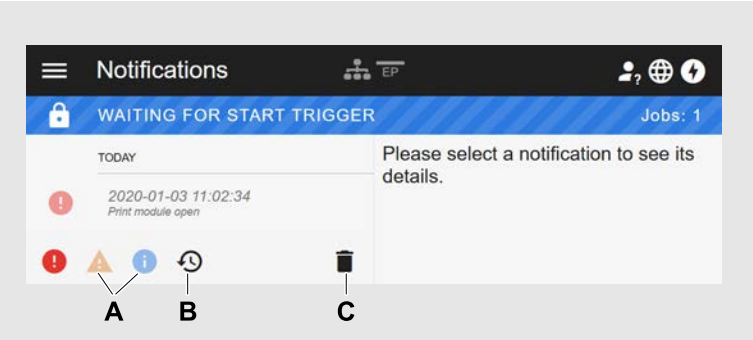


Fig. 14: Notification view with history.

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

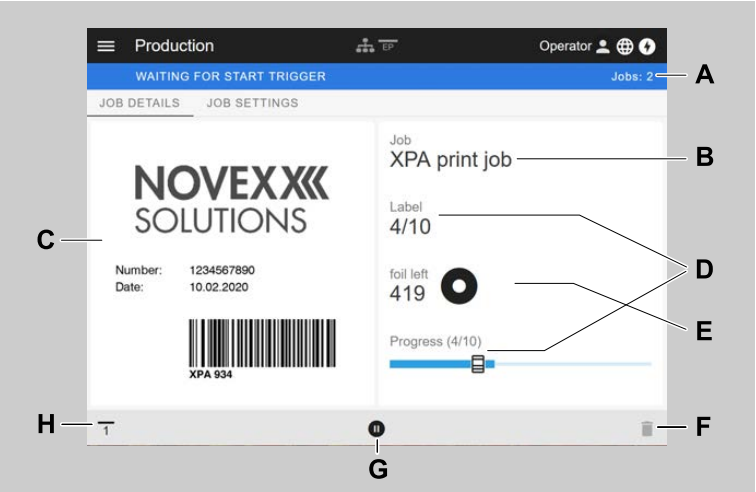


Fig. 15: “Job details” view of a print job in the web panel.

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	*Trashcan icon*: 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	*Stop or Start icon*: Click to stop or start the print job
H	*Start signal icon*: Click to print and dispense a label

“Job Settings” view

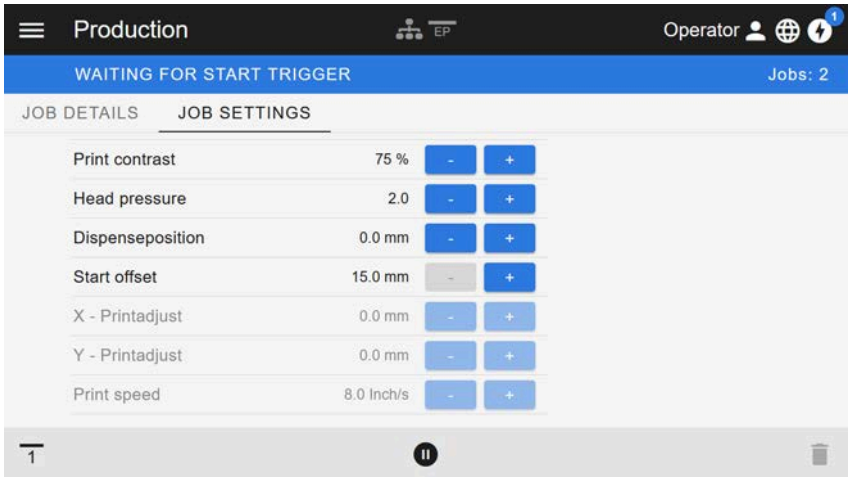


Fig. 16: View “Job Settings” of a print job in the web panel. Settings not accessible with the active role (here: “Operator”) are greyed out. The other settings can be changed by clicking on “+” or “-”.

Machine settings view

Main menu

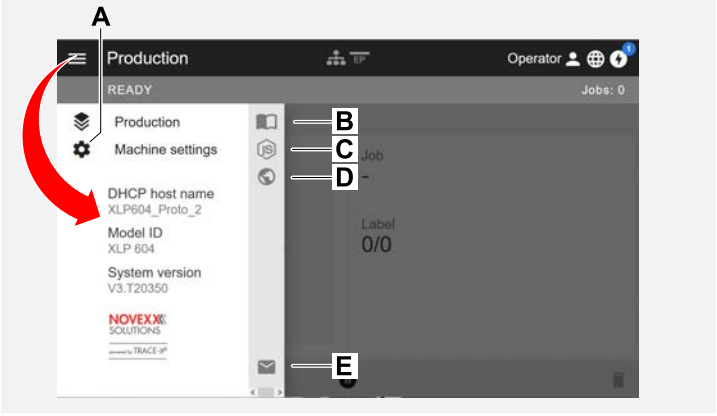


Fig. 17: View after clicking on the menu icon in the upper left corner.

Pos. no.	Function
A	Open machine settings (see following chapter)
B	Opens the user manual
C	EXPERTS Opens the description of the Node.js API
C	Opens the Novexx web page
D	Opens an e-mail to the NOVEXX Solutions service hotline

Machine settings

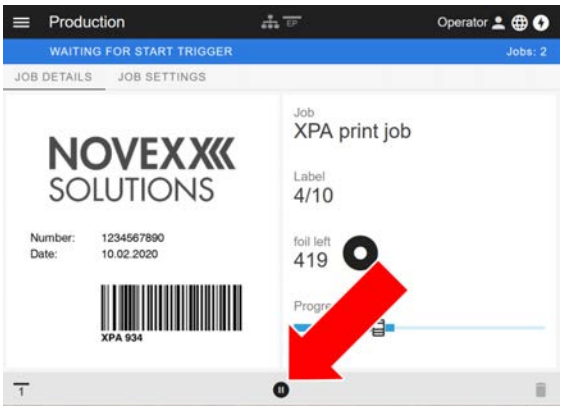
After clicking on “Machine settings”, the parameter menu familiar from the machine operating panel opens.

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.

Um Maschineneinstellungen vornehmen zu können, müssen zwei Bedingungen erfüllt sein:

- 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:



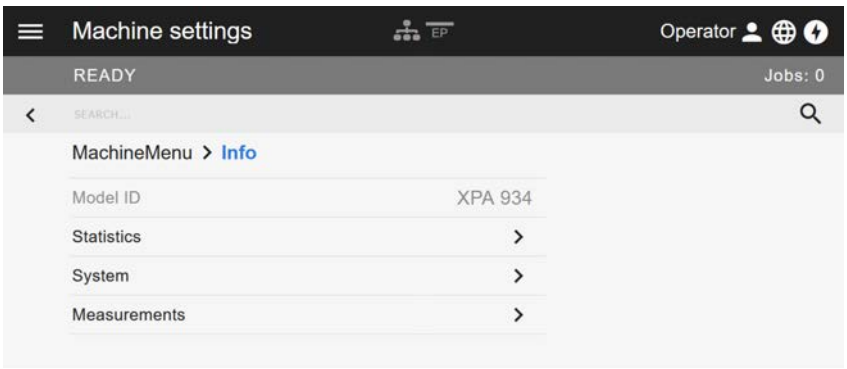


Fig. 18: Machine settings view with the operator role.

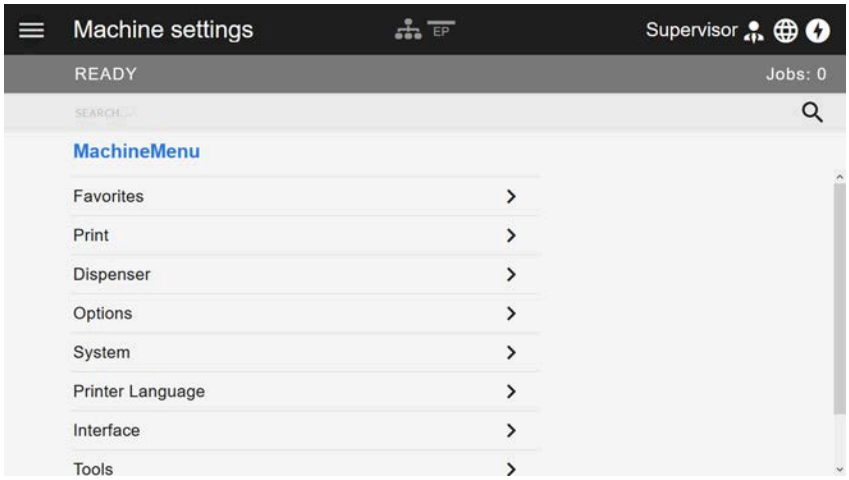


Fig. 19: Machine settings view with the supervisor role.

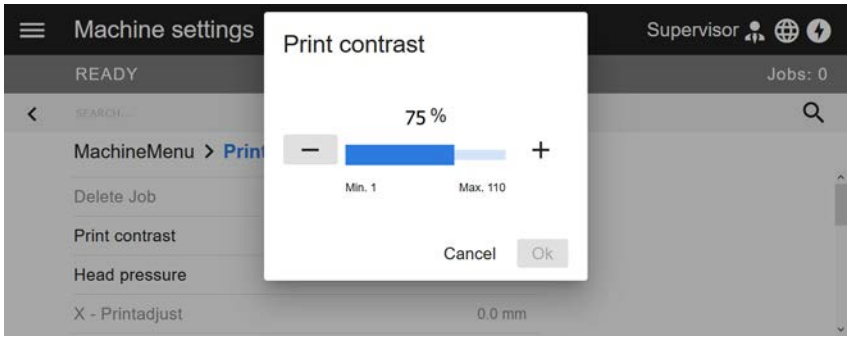


Fig. 20: Example: setting of Print > Print contrast.

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).

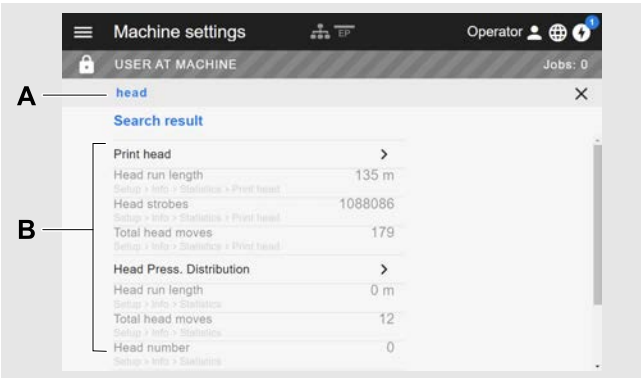


Fig. 21: After entering the search term “head” (A), only parameters containing “head” in the name are displayed (B).

Administration view

EXPERTS With the login roles “Supervisor” and “Service”, the administration view appears in the menu ad-

ditionally. This view provides special functions for qualified and authorized personnel. For more information, refer to the service manual.

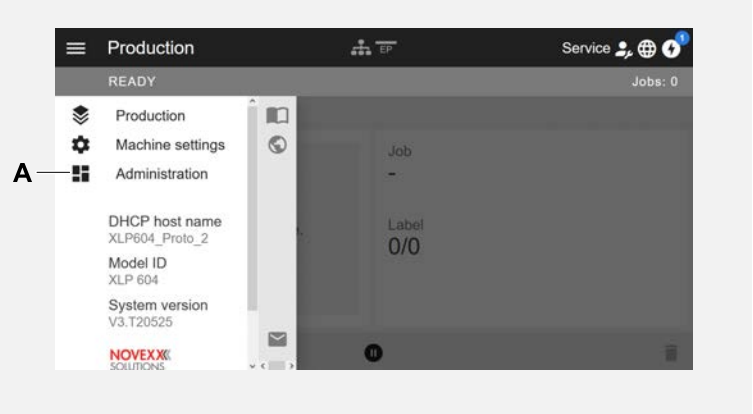


Fig. 22: After logging in as supervisor or service, the “Administration” entry (A) appears in the menu.

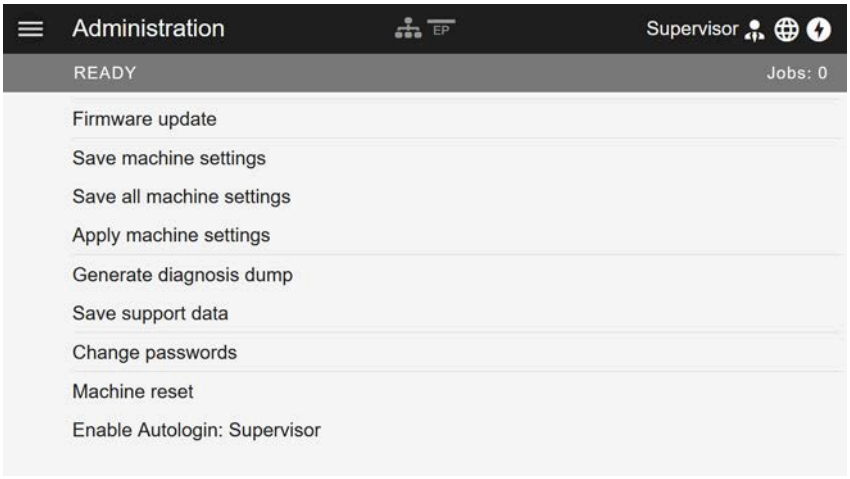


Fig. 23: Administration view (only with “Supervisor” or “Service” rights).

Related tasks

Firmware update via the web panel on page 260
Save all machine settings on page 148
Apply machine settings on page 150
Save support data on page 212

Related reference

Diagnostic dump on page 210

PARAMETER MENU

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 [4]	Print	Print (continued)
Parameter 1	DeleteJob	└ Ribbon
Parameter 2	Printcontrast	├ Ribbonwidth
...	Headpressure	├ RibbonRewTens.
Parameter n	X - Printadjust	├ RibbonUnwTens.
	Y - Printadjust	├ Colorside
	Printspeed	├ Ribbonlength
	DeleteSpooler	├ OuterribbonØ
	Material	├ InnerribbonØ
	├ Label	├ Ribbonautoecon.
	├ Detectlabellength	├ Headdownlead [5]
	├ Printmethod	├ Ribb.eco.limit [5]
	├ Materialtype	└ Feedmode
	├ Punchoffset	Format
	├ Materiallength	├ Bar codemultip.
	├ Materialwidth	├ UPC plain-copy
	├ Labelsens.type	├ EAN Readline
	├ Punchmode	├ EAN sep.lines
	├ Punchlevel [6]	├ Rotatedbarcodes
	├ Mat.enddetect.	└ Printdirection
	└ RewinderTension	Feedspeed
		(Backfeedspeed)
		Voltageoffset
		Headliftautom.

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

4 Parameter selection defined by the operator, see chapter Definition of Favorites on page 111

5 Only with Print > Material > Ribbon > Ribbon autoecon. = “On”

6 Only with Print > Material > Label > Punch mode = “Manual”

Options	Options (continued)	Options (continued)
Selection	├ Dispenseposition	Start Sensor
├ Periph.device	├ Dispensingedge	├ Startprintmode
└ Statussignals	├ Applymode	├ Starterrorstop
Dispenser [7]	├ Head disp dist. [8]	└ Externalsignal
├ DispenseMode	├ Displaymode	Rewinder [9]
├ Real 1:1	├ Dispensecounter	├ Rewinddirection
├ Dispensingmode	└ Disp.Cnt.Reset	├ RewinderValues
└ Max InitFeedback	Cutter [10]	└ Rewinderadjust
├ Speed	├ Cut mode	Tear-off edge [11]
├ Printspeed	├ Cut speed	└ Dispenseposition
└ Feedspeed	├ Cut width	LTMA [12]
├ Start Signal	├ Cut position	├ ApplyMode
├ Startoffset	├ Doublecut	├ Strokelength
├ Startprintmode	└ Rest position	├ Appl.Waitpos.
├ Applicationmode	Material OD Sensor	├ Applicatorspeed
├ Start source	├ Mat.ODSensor1	└ Restartdelay
├ Starterrorstop	├ Mat.ODSensor2	Keyboard
├ Productlength	├ Materialenderr [13]	
├ Multilabel mode	├ Materialendwarn [13]	
├ Label2 offset [14]	└ Ext.ODsensor [15]	
└ Label3 offset [16]		

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

7 Only with Options > Selection > Periph. device = “Spender”
8 Only with Dispenser > Dispensing edge = “User defined”
9 Only with Options > Selection > Periph. device = “Rewinder”
10 Only with Options > Selection > Periph. device = “Cutter”
11 Only with Options > Selection > Periph. device = “Tear-off edge”
12 Only with Options > Selection > Periph. device = “LTMA”
13 Only with Options > Material OD Sensor > Mat. OD Sensor 1 = “Rotation pulse” or Options > Material OD Sensor > Mat. OD Sensor 2 = “Rotation pulse”
14 Only with Dispenser > Start Signal > Multi label mode = “x labels/start”
15 Only with Options > Material OD Sensor > Mat. OD Sensor 1 = “Level high activ” or “Level low active” *or* Options > Material OD Sensor > Mat. OD Sensor 2 = “Level high activ” or “Level low active”
16 Only with Dispenser > Start Signal > Multi label mode = “x labels/start” with x=3

System	Printer Language	Interface
Language	PrintInterpret.	Print interface
Accessauthoriz.	EasyPlug Setting	Network
(Operatorpassword)	├ Characterfilter	├ IP Addressassign
(Supervisorpassword)	├ Charactersets	├ IP address
(Servicepassword)	├ EasyPlugerrors	├ Net mask
Factorysettings	├ EasyPlugwarning	├ Gatewayaddress
Customdefaults	├ Spoolermode	├ Portaddress
SetupWizards	├ StandAloneInput	├ DHCPhostname
(Run SetupWizard?)	├ #VW/IInterface	└ Services
Turn-onmode	├ PrinterIDno.	├ WEBserver
Hardware Setup	├ Commandsequence	├ FTPserver
├ (Printertype)	└ Ignore#IM cmd.	├ WLAN
├ Timezone	ZPL Setting [17]	├ (MQTT broker)
└ RealtimeClock	├ Manualcalibrate	├ (MQTT broker IP)
Print Control	├ Darkness	├ Timeclient
├ Miss.labeltol.	├ Labeltop	├ TimeserverIP [18]
├ Gap detect.mode	├ LeftPosition	├ Timezone [18]
├ Max InitFeedback	├ ErrorIndication	└ Sync.interval [18]
├ Ribb.stretching	├ ErrorChecking	Serial Port 1
├ Singlestartquant	├ Resolution	├ Baudrate
├ Reprintfunction	├ 305 DPIscaling	├ No. ofdatabits
├ Ribbonendwarn.	├ ImageSavePath	├ Parity
├ Ribbonwarnstop	├ LabelInvert	├ Stopbits
├ Errorreprint	└ Commands	├ Datensynchro.
├ Single-jobmode	├ FormatPrefix	└ Frameerror
├ Temp.reduction	├ ControlPrefix	Drives
└ Printinfomode	├ DelimiterChar	├ Drive C
	├ Command^PR	├ Drive D
	├ Command^MT	├ Drive E
	├ Command^JM	└ Drive F
	└ Command^MD/^SD	Homemode

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

17 Only visible with Printer Language > Print Interpret. = “ZPL Emulation”

18 Only visible with Interface > Network > Services > Time client = ““Automatic” or “Time server IP””

Tools	Tools (continued)	Info
Diagnostic	├ (Punchycalibr.)	ModelID
├ (Usermodified) [19]	├ (Headidle adjust)	Status Printouts
│ ├ Parameter 1	└ (Headpress. adjust)	├ PrinterStatus
│ ├ ...	Internal Flash	├ MemoryStatus
│ └ Parameter n	├ Copyfrom USB [25]	├ FontStatus
├ StoreParameters	└ DeleteDir	├ ServiceStatus
├ Gen.SupportData		├ Dottestendless
├ EasyPl.file log [20]		├ Dottestpunched
├ Log filesdelete [20]		└ Referencelabel
├ EasyPlugMonitor		Statistics
└ EP MonitorMode		└ Print head
Test		├ Headrunlength
├ Sensortest		├ Headstrobes
├ Printtest		├ Totalheadmoves
└ Cutter test [21]		├ Operationtime
(Service)		├ Contrastdistribution
├ (Servicedone)		├ Headpressure distribution
├ (Headexchange)		├ Thermaldistribution
├ (Rollerexchange)		└ Printspeeddistribution
├ (Cutterchange) [21]		├ Headrunlength
└ (Serv.datareset)		├ Rollrunlength
(Adjustment)		├ Cutson knife [21]
├ (SensorAdjust)		├ Totalheadmoves
├ (Matendtolerance)		├ Serviceoperations
├ (Feedadjustlabel)		├ Headnumber
├ (Feedadjust)		├ Rollnumber
├ (Vorwfeed rat.)		├ Cutternumber [21]
├ (Backwfeed rat.)		├ Totalcuts [21]
├ (Ribbon feed adj.)		├ Tot.mat.length

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

19 Parameters, whose settings differs from the factory setting.

20 Only visible with Interface > Drives > Drive C ≠ “None”

21 Only with Options > Selection > Periph. device = “Cutter”

Info (continued)	Info (continued)	Info (continued)
├ Tot.ribb.length	├ Max.Labellength	└ Material rewind
├ Headstrobes	└ Customdefaults	├ Modulename
├ Operationtime	└ CPU board data	├ Modulepartnumb.
└ TotalOperation	├ CPUidentifier	├ Serialnumber
System	├ FPGAversion	├ Productiondate
└ Module FW. Vers.	├ Modulename	├ CANMACaddress
├ System version	├ MACAddress	└ Moduletype
├ System revision	├ Modulepartnumb.	└ TPH power
├ System date	├ PCBpartnumber	├ Modulename
├ Operator panel	├ Serialnumber	├ Modulepartnumb.
├ Ribbon unwinder	├ Productiondate	├ Serialnumber
├ Ribbon rewinder	└ Moduletype	├ Productiondate
├ Material rewind	└ Operator panel	├ CANMACaddress
├ TPH power	└ Serialnumber	└ Moduletype
├ Ribbon feed [22]	└ Ribbon unwinder	└ Ribbon feed [23]
└ Cutter [24]	├ Modulename	├ Modulename
└ Memory Data	├ Modulepartnumb.	├ Modulepartnumb.
├ RAMmemorysize	├ Serialnumber	├ Serialnumber
├ SpaceforRAM disc	├ Productiondate	├ Productiondate
├ Storagemedia	├ CANMACaddress	├ CANMACaddress
├ InternalFlash	└ Moduletype	└ Moduletype
├ USB1 [25]	└ Ribbon rewinder	└ Cutter [26]
├ USB2 [25]	├ Modulename	├ Modulename
├ FrontUSB [25]	├ Modulepartnumb.	├ Modulepart numb.
├ Spoolersize	├ Serialnumber	├ Serialnumber
├ SpaceforJobs	├ Productiondate	├ Productiondate
	├ CANMACaddress	├ CANMAC address
	└ Moduletype	└ Moduletype

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

22 Only with Print > Material > Ribbon > Ribbon autoecon. = “On”
23 Only with Print > Material > Ribbon > Ribbon autoecon. = “On”
24 Only with Options > Selection > Periph. device = “Cutter”
25 If any external flash memory is connected
26 Only with Options > Selection > Periph. device = “Cutter”

Info (continued)		
└	Power supply	
	├	Modulename
	├	Modulepartnumb.
	├	Serialnumber
	├	Productiondate
	├	Moduletype
	└	Version
└	Print head	
	├	Modulename
	├	Modulepartnumb.
	├	Serialnumber
	├	Productiondate
	├	Moduletype
	├	Resolution
	├	Width
	└	Resistance
Measurements		
├	Ribb.rest length	
├	Ribbondiameter	
├	Ribb.rewinder Ø	
└	Headtemperature	

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

Parameter Reference

Print contrast

Setting range	Default setting	Step width	Easy Plug
[1...110] %	50%	1	#!H, #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 width	Easy Plug
[1.0...3.0]	2.0	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 width	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 width	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	Default setting	Step width	Easy Plug
XLP 604: [3..16] Inch/s XLP 605: [3..16] Inch/s XLP 606: [3..14] Inch/s	8 Inch/s	1 Inch/s	#PC1003, #PR

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

Setting range	Default setting	Step width	Easy Plug
--	--	--	#!CA

Pressing key 4 cancels the active print job.

Delete Spooler

Setting range	Default setting	Step width	Easy Plug
--	--	--	#!CA

Pressing key 4 deletes all print jobs queued in the spooler.

Print method

Settings	Default setting	Step width	Easy Plug
Thermo transfer, Thermal printing	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)

Punch offset

Setting range	Default setting	Step width	Easy Plug
-8...max. label length [27]	0 mm	0.1 mm	#PC1008, #PO

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

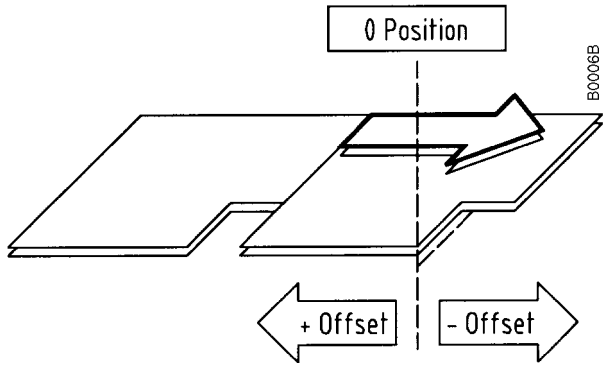


Fig. 24: Positive and negative offset in relation to the feed direction (arrow).

- 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 width	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
- *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

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

Settings	Default setting	Step width	Easy Plug
[5...max. label length [28]]	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 width	Easy Plug
6,0...max. width [29]	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 width	Easy Plug
Auto negotiation, Manual	Auto negotiation	--	#PC1022

- *Auto negotiation*: 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 usin-g the parameter Print > Material > Punch level.

Punch level

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

‖ Only if Print > Material > Punch mode = “Manual” ‖

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

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

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

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 width	Easy Plug
Punched, Reflex, Full size, Reflex (upper)	Punched	--	#PC2015, #IM

- *Punched*: Light transmission sensor for labels with transparent or register gaps (self-adhesive labels)
- *Reflex*: w/o function
- *Full size*: w/o function
- *Reflex (upper)*: w/o function

Mat. end detect.

(Material end detection)

Settings	Default setting	Step width	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

Rewinder Tension

Settings	Default setting	Step width	Easy Plug
[50...150]	100	1	#PC1043

Increases the pulling force of the rewinder. Increasing the pulling force can be helpful, for example, for difficult-to-dispense label material.

Ribbon width

Settings	Default setting	Step width	Easy Plug
[30...107] mm	107 mm	1 mm	#PC1033

Width of the applied thermotransfer ribbon.

Ribbon Unw Tens.

Settings	Default setting	Step width	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 width	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 width	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 width	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 width	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 width	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 width	Easy Plug
[1...10]	1	1	#PC1009, #YB

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

UPC plain-copy

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

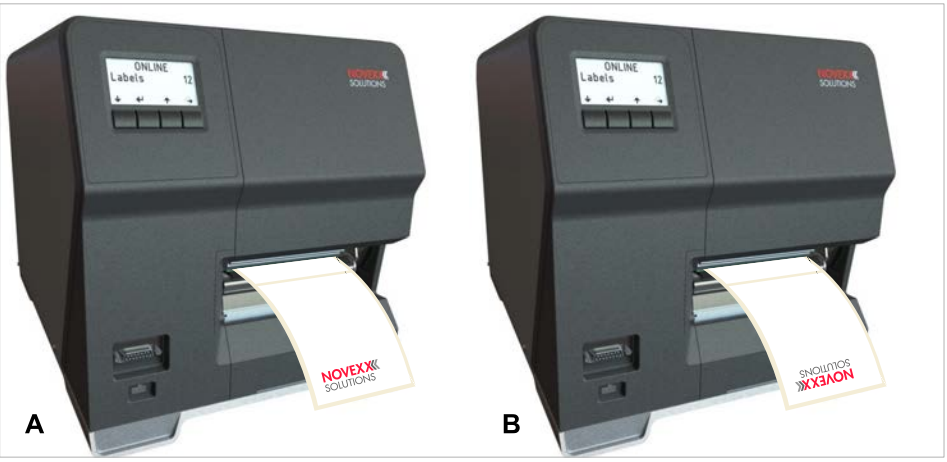


Fig. 25: Orientation of the printout „Foot first“ (A) or „Head first“ (B).

- *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:
>
> $b_{Mat} = b_{Tr} - 2\ mm$, with
>
> b_{Mat}: Material width
>
> b_{Tr}: Backing paper width

Feed speed

> Parameter is only visible with *deactivated* dispense function (Options > Selection > Periph. device ≠ “Dispenser”) and with *deactivated* (internal) rewind function (Options > Selection > Periph. device ≠ “Intern. rewinder”)

Setting range	Default setting	Step width	Easy Plug
XLP 604: [3..16] Inch/s XLP 605/606: [3..16] Inch/s	8 Inch/s	1 Inch/s	#PC1004, #PR

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	Default setting	Step width	Easy Plug
XLP 604: [Off; 3.0..16.0] Inch/s XLP 605/606: [Off; 3.0..16.0] Inch/s	8.0 Inch/s	0.1 Inch/s	#PC1050

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 eqals the feed speed. This setting is sufficient for most applications.

Voltage offset

Setting range	Default setting	Step width	Easy Plug
[-20...20] %	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 width	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 width	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 b-eginning stays unprinted. The width of the unprintable stripe is calculated as follows:
  Distance print line to dispensing edge (25.0 mm) + Dispense position

  See also: Parameter Dispenser > Dispenseposition.
- The label is being dispensed while printing.
- The output volume is at its maximum level.

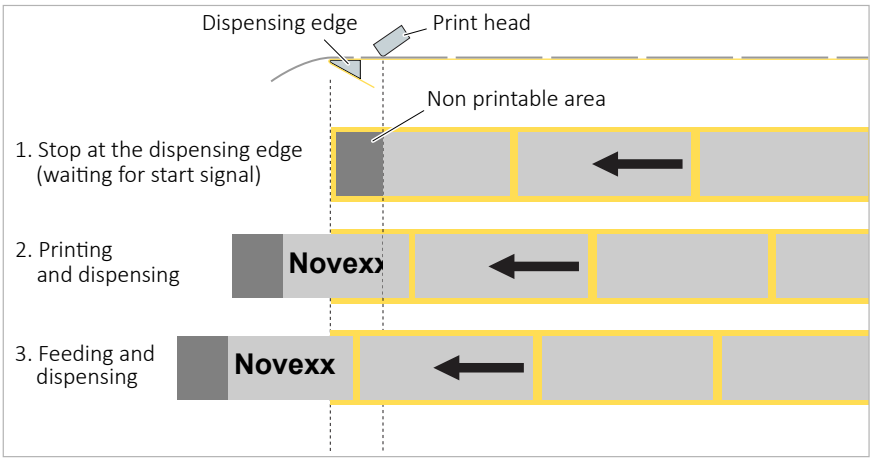


Fig. 26: Printing sequence in “Normal 1:1 mode” (schematic).

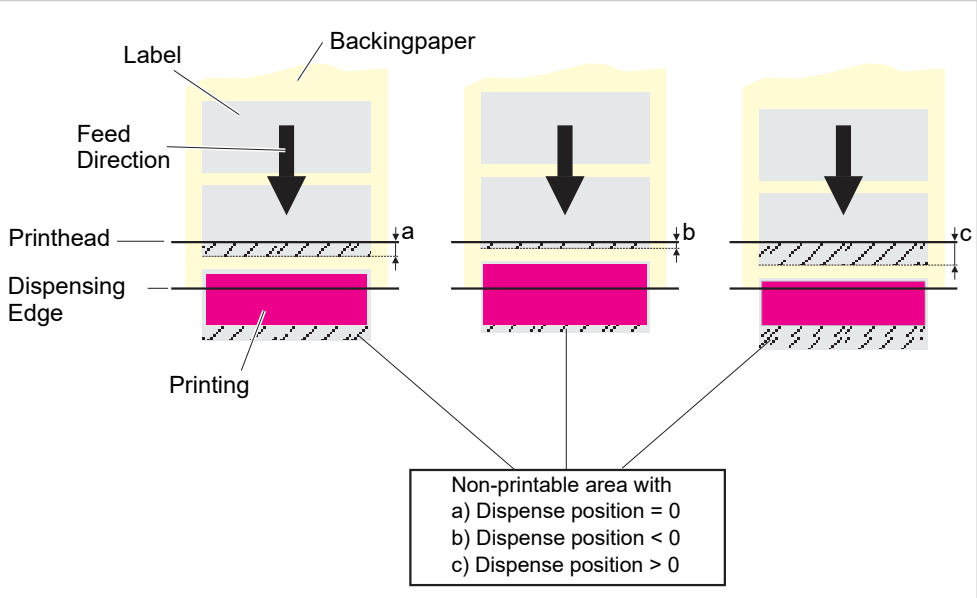


Fig. 27: The size of the not imprintable area in Normal 1:1 depends of the setting of parameter Dispenser > Dispenseposition.

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

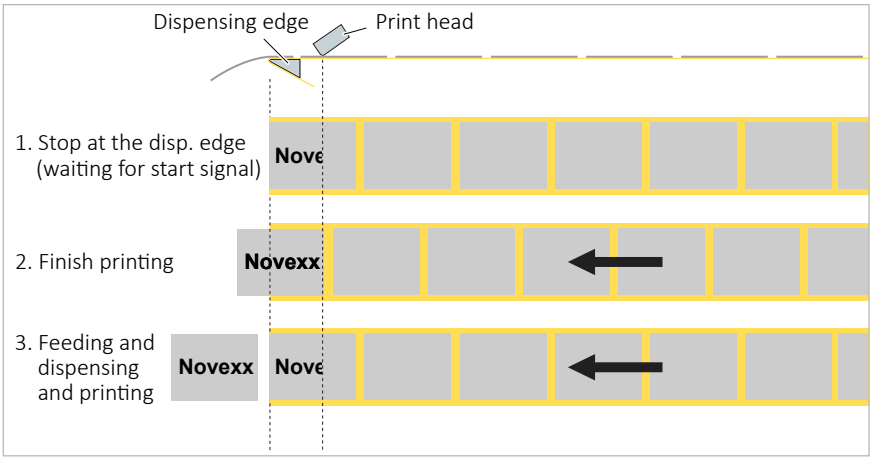


Fig. 28: Printing sequence in “Batch mode” (schematic).

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*.

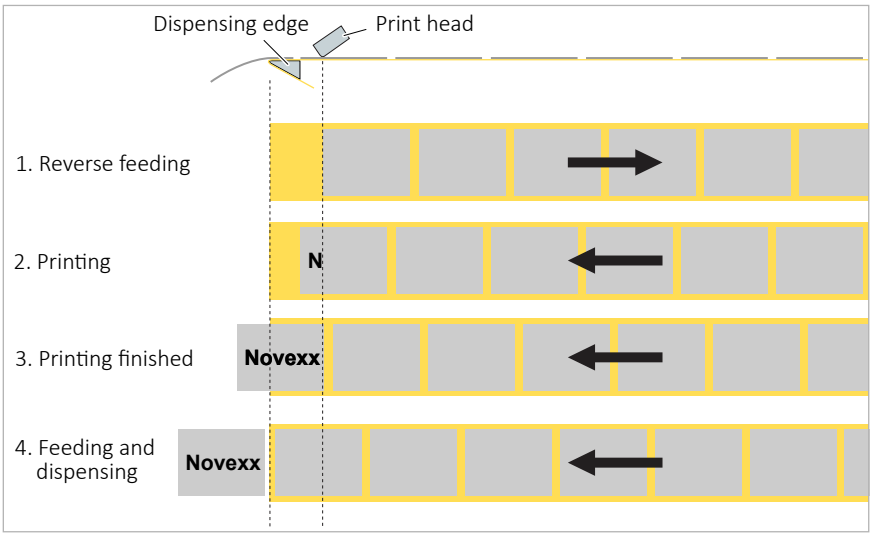


Fig. 29: Printing sequence in “Real 1:1 mode” (schematic).

Dispense only

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

Dispensing mode

‖ Parameter is only effective in real 1:1 mode (Dispenser > Dispensing mode = “Real 1:1 mode”)! ‖

Setting range	Default setting	Step width	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 if System > Print Control > Gap detect. mode = “Autom. feed back”

Setting range	Default setting	Step width	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.

External signal

Settings	Default setting	Step width	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 full”) and stops the printer.

Dispenseposition

Setting range	Default setting	Step width	Easy Plug
[-30.0...20.0] 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.

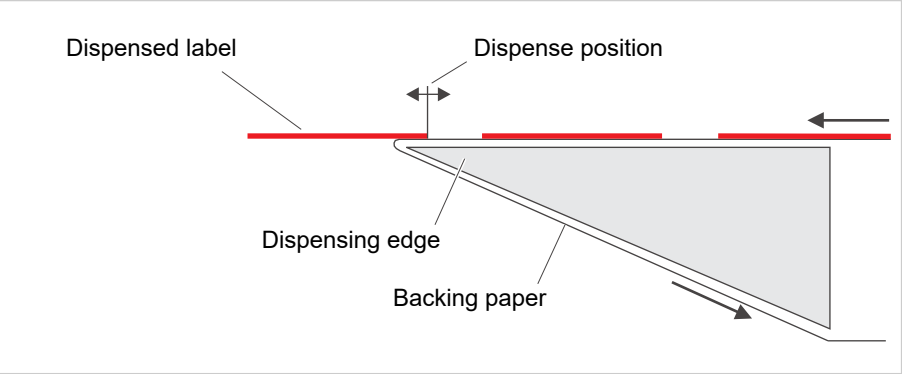


Fig. 30: Dispense position of the dispensed label.

Dispensing edge

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

Adjusts the feed to the length of the dispensing edge.

- *Short*: Short dispensing edge
- *long*: Long dispensing edge
- *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 width	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 width	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 width	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 width	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 width	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 8IO 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*: Start errors are worked up (the printer stops!)

  If a product start error occurs, the machine stops and displays the appropriate status message.

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

– ERROR\

– MACHINE STATUS\

- *Off*: Start errors are being ignored
- *Off label queued:* If a product start error occurs, one label more is printed before the printer stops.

Product length

Setting range	Default setting	Step width	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 width	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)

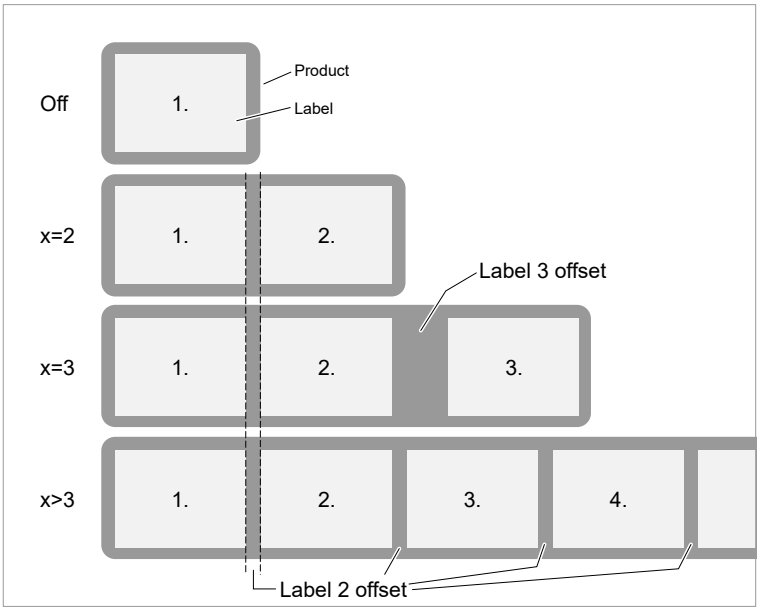


Fig. 31: For 3 labels in a row (x=3) there is the special case that the distances between the first and second label and between the second and third label can be set differently. For all other cases, the distance is the same for all subsequent labels.

Label 2 offset

‖ Only with Dispenser > Start Signal > Multi label mode = “x labels/start” ‖

Setting range	Default setting	Step width	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.

Label 3 offset

‖ Only with Dispenser > Start Signal > Multi label mode = “x labels/start” with x=3 ‖

Setting range	Default setting	Step width	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.

Start print mode

Setting range	Default setting	Step width	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.

Restart delay

Setting range	Default setting	Step width	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.

Position timeout

Setting range	Default setting	Step width	Easy Plug
[500…99999] ms	2000 ms	1 ms	#PC3109

‖ Appears on all applicator types with exception of Direct Dispense and LA-BO. ‖

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 one or both of its end positions within the time set.

TouchDownTimeout

‖ Only at applicators that work with a touchdown sensor. ‖

Setting range	Default setting	Step width	Easy Plug
Off, (100...99999) ms	Off	--	#PC3117

Timeout at the touchdown sensor. This time specifies the maximal wait time for the touchdown trigger event.

- *Off*: The function is switched off
- *xxxx ms*: If the specified time xxxx mx 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.

Keyboard

Setting range	Default setting	Step width	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 width	Easy Plug
German, English, French, Spanish, Dutch, Danish, Italian, Polish, Turkish, Russian, Czech, Chinese [30], Japanese, Hungarian	English	--	#PC2051

Setting the display language.

Access authoriz.

(Access authorization)

Settings	Default setting	Step width	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
Off	Never	--	--
Power-up code	After restart	Access code	Operator, Supervisor, Service
Operator		Operator Code	Operator, Supervisor, Service
Supervisor	Access to parameter menu	Supervisor Code	Supervisor, Service
Operator auto	Never	--	--

Table 15: Setting options for the key code query.

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

Entering the code:

► Press the specified keys one after the other (1=left key, 4=right key).

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

Role	Key code	Rights
Operator	1-1-3-2	• *Parameter menu*: Access is limited to the Info menu • *Web panel*: Access to parts of the production and machine settings view • *Ftp access* to machine memory: read-only

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

Role	Key code	Rights
Supervisor	2-2-3-1-2-2	• *Parameter menu*: Access to all parameters except service parameters • *Web panel*: Access to the production view, parts of the machine settings view and the administration view • *Ftp access* to machine memory: Read and write access rights
Service	1-2-3-1-2-2-2	• *Parameter menu*: Access to all parameters • *Web panel*: Full access to production, machine setting and administration views • *Ftp access* to machine memory: Read and write access rights

Table 16: Permitted roles, their key codes and the associated rights.

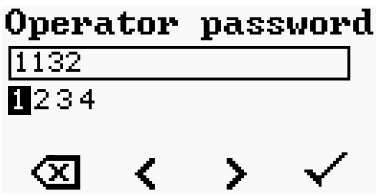
> CAUTION!
> Service mode: Input errors to certain parameters can make the printer inoperable or can damage it.
> ► The service code may only be applied by trained service technicians.

Operator password

> Only appears in service mode

Settings	Default setting	Step width	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 width	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 width	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 width	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 width	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 startet, appears after switching-on the pr-inter
- *No*: The setup wizard query is switched off

Turn-on mode

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

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

- *Ready*: Printer starts witch 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 width	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 width	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 recom-mended. 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.

Gap detect. mode

Settings	Default setting	Step width	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 width	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 befor restarting the print process. Afterwards, feeding starts befor 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 width	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 width	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

Ribbon end warn.

Setting range	Default setting	Step width	Easy Plug
[5.0...300.0] mm	25.0 mm	0.1 mm	#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 width	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
```

Error reprint

Settings	Default setting	Step width	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 width	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 requests the user to acknowledge by pressing key 4.

Temp. reduction

(Reduction in the print head temperature)

Setting range	Default setting	Step width	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 156.

Print info mode

Settings	Default setting	Step width	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 width	Easy Plug
Easyplug, Lineprinter, Hexdump, ZPL Emulation	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® [31] command language („ZPL“) can be interpreted

  ‖ Firmware loading requires changing into EasyPlug first. ‖

Print interface

Settings	Default setting	Step width	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*.

  ‖ Don´t send data to more than one interface at a time. ‖

Character filter

Settings	Default setting	Step width	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 width	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

31 ZPL II is a registered trademark of ZIH Corp.

- 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) [32]	#	$	@	[	\	]	^	`	{	|	}	~	print
IBM	#	$	@	[	\	]	^	`	{	|	}	~	print
Special	ƒ	¢	blank	blank	¼	½	blank	blank	«	•	»	±	blank
Norway	#	$	@	Æ	¥	Å	^	`	æ	¢	å	~	blank
Spain	#	$	@	i	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
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 17: Country settings for applications, which base on 7bit ASCII code.

EasyPlug errors

Setting range	Default setting	Step width	Easy Plug
Tolerant handl., Strict handling	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.

  By pressing key 4, the display can be toggled between error message and Easy Plug command text

32 Covering ISO 8859-1.

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

EasyPlug warning

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

Switches the display of errors, which are caused by faulty Easy Plug code, on or off.

Spooler mode

Settings	Default setting	Step width	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 width	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 width	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 width	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 width	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 width	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. This setting ("Yes") ignores the material information in the print job.

IP Addressassign

Settings	Default setting	Step width	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 width	Easy Plug
[0...255] [33]	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 width	Easy Plug
[0...255] [34]	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 width	Easy Plug
[0...255] [35]	0.0.0.0	--	#PC1504

000.000.000.000 = no gateway is used

Port address

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

DHCP host name

33 for each xxx-value in in xxx.xxx.xxx.xxx

34 for each xxx-value in xxx.xxx.xxx.xxx

35 for each xxx-value in xxx.xxx.xxx.xxx

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

Host name of the printer. Default setting: “nxx-mmmmmm” (mmmmmm are the last 3 bytes of the MAC adress)

WEB server

Settings	Default setting	Step width	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 25.

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

FTP server

Settings	Default setting	Step width	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 142.

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

Wi-Fi

Settings	Default setting	Step width	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 RFC868 time protocol on UDP port 37. For this purpose, a time server IP address needs to be given. Date and time are initially requested at start up an optional in a setable 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 width	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] [36]	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 width	Easy Plug
[-12:00…+12:00]	00:00	00:30	#PC1533

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 width	Easy Plug
2400 Baud, 4800 Baud, 9600 Baud, 19200 Baud, 38400 Baud, 115200 Baud	115200 Baud [a]	--	#PC1201

36 for each xxx-value in xxx.xxx.xxx.xxx

Speed of data transfer using the serial interface.

No. of data bits

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

Parity

Setting range	Default setting	Step width	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 width	Easy Plug
[1..2]	1	--	#PC1204

Data synch.

Setting range	Default setting	Step width	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 width	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 width	Easy Plug
None, Internal Flash, USB1, USB2, Front USB	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.
- *Front USB*: Assigns drive letter C to the USB thumb drive at the front panel of the printer.

Drive D

Settings	Default setting	Step width	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.
- *Front USB*: Assigns drive letter D to the USB thumb drive at the front panel of the printer.

Drive E

Settings	Default setting	Step width	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.

- *Front USB*: Assigns drive letter E to the USB thumb drive at the front panel of the printer.

Drive F

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

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

- *None*: F is not assigned
- *Internal Flash*: Assigns drive letter F to the internal Flash memory.
- *USB1*: Assigns drive letter F to the *first* USB thumb drive at the host interface.
- *USB2*: Assigns drive letter F to the *second* USB thumb drive at the host interface.
- *Front USB*: Assigns drive letter F to the USB thumb drive at the front panel of the printer.

Home mode

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

- *Interf. disabled*: When the machine is in "Home" mode, Easy Plug commands are *not* accepted
- *Interf. enabled*: When the machine is in "Home" mode, Easy Plug commands *are* accepted

Store Parameters

Settings	Default setting	Step width	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.

EasyPl. 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 74). 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 width	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 width	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 > EasyPl. file log.

EasyPlug Monitor

Only appears in service mode

Settings	Default setting	Step width	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 width	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 trans-mitted.

Sensor test

For details refer to chapter Sensor test/adjustment on page 256.

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 256.

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 loose 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 [37] #PC5105 [38]

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 *faster* 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
< 100%	Print roll motor rotates *slower* 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

37 Print > Material > Label > Print method = “Thermo transfer”

38 Print > Material > Label > Print method = “Thermal printing”

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 *faster* 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 *slower* 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“.

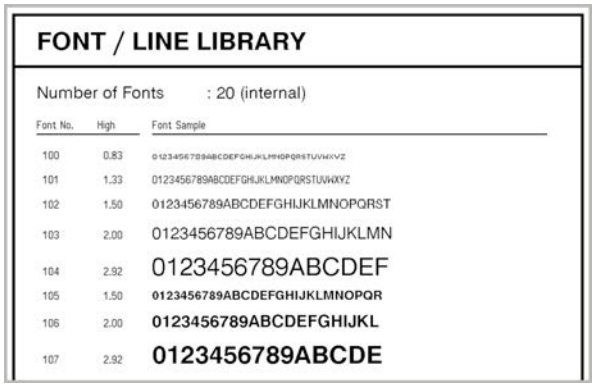


Fig. 32: Extract of the status printout “Font Status”: List of internal fonts in section „Font / Line Library“.

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-ecked pattern! ‖

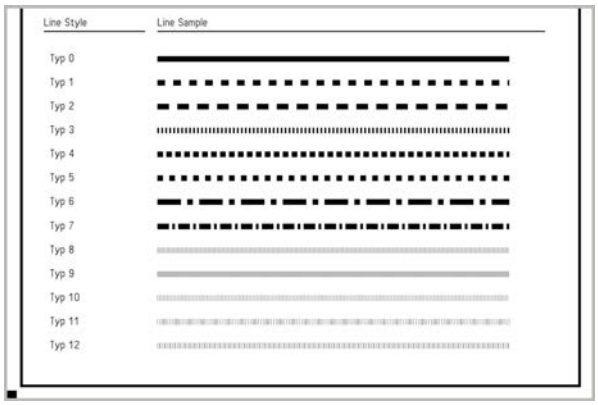


Fig. 33: Extract of the status printout “Font Status”: List of internal line styles in section „Font / Line Library“.

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) b-ar c-odes 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 18: 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. 34: 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

Parameter in menu	Effect	Easy Plug
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 ist 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

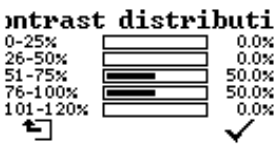
ⓘ No setting option - Only display

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

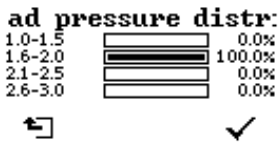
Shows the distribution of the set print contrast over all print operations performed with this print head.

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

Head pressure distribution

ⓘ No setting option - Only display

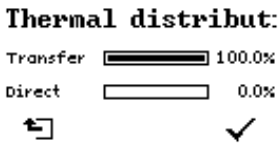
Shows the distribution of the set print head pressure over all print operations performed with this print head.

Display	Class	Easy Plug
	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
	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
	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.

Ribbon feed

No setting option - Only display	Easy Plug
ⓘ	#!PG30721

Shows the firmware version of the ribbon motor output stage.

Cutter

No setting option - Only display	Easy Plug
ⓘ	#!PG30771

Shows the firmware version of the output stage for peripheral devices.

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
TPH power (distribution board)	#!PG30607
Material rewinder (internal rewinder)	#!PG30587
Cutter	#!PG30777
Ribbon feed	#!PG30727
Dispenser	#!PG30967

Serial number

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

No setting option - Only display

Module	Easy Plug
CPU board	#!PG30505
Ribbon unwinder	#!PG30525
Ribbon rewinder	#!PG30545
TPH power (distribution board)	#!PG30605
Power supply	#!PG30665
Print head	#!PG30685
Material rewinder (internal rewinder)	#!PG30585
Cutter	#!PG30665
Ribbon feed	#!PG30725
Dispenser	#!PG30965

Production date

Shows the production date that is programmed by the board manufacturer.

No setting option - Only display

Module	Easy Plug
CPU board	#!PG30506
Ribbon unwinder	#!PG30526
Ribbon rewinder	#!PG30546
TPH power (distribution board)	#!PG30606
Power supply	#!PG30666
Print head	#!PG30686
Material rewinder (internal rewinder)	#!PG30586
Cutter	#!PG30776
Ribbon feed	#!PG30726
Dispenser	#!PG30966

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
TPH power (distribution board)	TPHC	#!PG30608
Power supply	SMPS	#!PG30668
Print head	PRHD	#!PG30688
Material rewinder (internal rewinder)	BLDC	#!PG30588
Cutter	STEP	#!PG30778
Ribbon feed	STEP	#!PG30728
Dispenser	STEP	#!PG30968

PCB part number

No setting option - Only display	Easy Plug
ⓘ	#!PG30042

Shows the part number of the board without components.

Module name

Shows the name of the relvant module.

ⓘ No setting option - Only display

Module	Easy Plug
CPU board	#!PG30500
Ribbon unwinder	#!PG30520
Ribbon rewinder	#!PG30540
TPH power (distribution board)	#!PG30600
Power supply	#!PG30660
Print head	#!PG30680
Material rewinder (internal rewinder)	#!PG30580
Cutter	#!PG30770
Ribbon feed	#!PG30720
Dispenser	#!PG30960

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
TPH power (distribution board)	#!PG30603
Power supply	#!PG30663
Print head	#!PG30683
Material rewinder (internal rewinder)	#!PG30583
Cutter	#!PG30773
Dispenser	#!PG30963

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 width	Easy Plug
Off, On	On	--	#PC3250

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

Mat. OD Sensor 1

Setting range	Default setting	Step width	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 width	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 width	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

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

Front USB

> Only with connected USB thumb drive on the front side of the printer.

No setting option - Only display	Easy Plug
ⓘ	#!PG30099

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

Manual Calibrate

Settings	Default setting	Step width	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 width	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 width	Easy Plug
[-240...240] Dots	0	1	#PC4006

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

Left Position

Setting range	Default setting	Step width	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 width	Easy Plug
LOW, HIGH, OFF	OFF	--	#PC4010

Selects the way, in which the printer responds in the event of error occuring 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 width	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 width	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 width	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 width	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 width	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

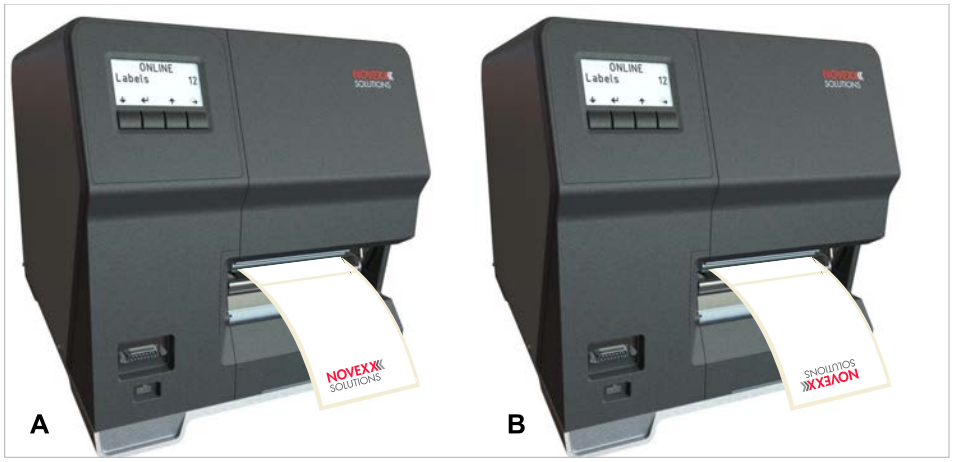


Fig. 35: Orientation of the printout: Setting “Disable” (A) or “Enable” (B).

- *Disable*: The label is printed with „normal“ orientation (A).
- *Enable*: The label printout is rotated by 180° (B).

Format Prefix

Setting	Default setting	Step width	Easy Plug
xxH	5EH [39]	--	#PC4004

Indicates the start of a ZPL format instruction.

39 0x5E = „Caret“

Control Prefix

Setting	Default setting	Step width	Easy Plug
xxH	7EH [40]	--	#PC4003

Indicates the start of a ZPL control instruction.

Delimiter Char

Setting	Default setting	Step width	Easy Plug
xxH	2CH [41]	--	#PC4005

Used as a parameter place marker in ZPL format instructions.

Command ^PR

Settings	Default setting	Step width	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 width	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 width	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.

40 0x7E = „Tilde“

41 0x2C = „Comma“

Command ^MD/~SD

Settings	Default setting	Step width	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 width	Easy Plug
	XLP 60x	--	#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 width	Easy Plug
[10.0..250.0] mm	24.5 mm	--	#PC2001

Application mode

Setting range	Default setting	Step width	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.

Apply mode

Setting range	Default setting	Step width	Easy Plug
After start sig., After print	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.

Label pres. sensor

Setting range	Default setting	Step width	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
```

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 width	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 width	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
```

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 width	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 int the setup file (`Setup.for`).

Head idle adjust

> Only appears in service mode

Parameter for adjusting the print head idle position.

For details read Print head idle adjustment on page 258

Head press. adjust

> Only appears in service mode
>
> So far only for use by NOVEXX Solutions.

Parameter for adjustment of the the print head pressure.

Delete Dir

Parameter for deleting directories in the internal flash memory.

For details read Erase data in internal flash memory on page 144.

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 143.

Cut mode

> Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”)

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

This is where the procedure for the label output and cut is defined.

- *Real 1:1 mode*: The whole surface of the label is printable. The label is pushed forward to the cutter for cutting. After the cut, the beginning of the next label is drawn back under the print head. This reduces the output volume (in relation to a certain time).

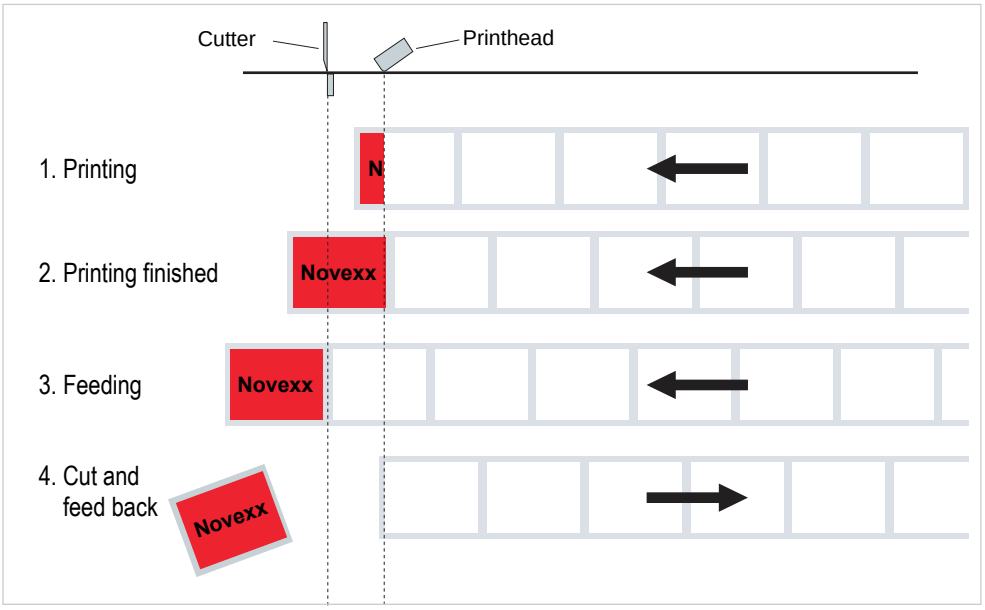


Fig. 36: Printing process (schematic) in „Real 1:1 Mode“.

- *Batch mode*: Requirements for the batch mode are:
  - Material length >18 mm
  - Number of cuts for a print job - at least 2 or more

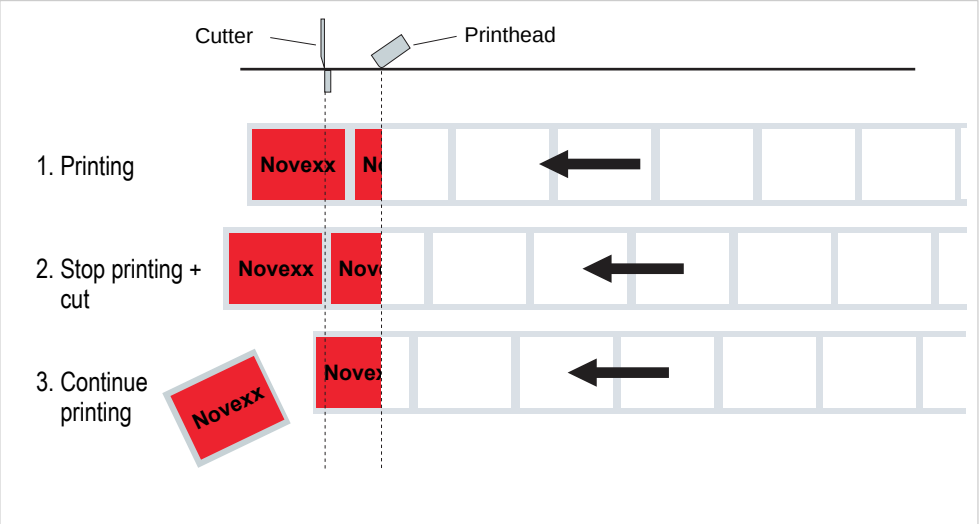


Fig. 37: Printing process in Batch mode (schematic).

- *Normal 1:1 mode*: In N1:1 mode, cutting takes place during printing. The zero-line of the printing is shifted 18 mm in y-direction. This offset equals the distance cutter-print head. Caused by this shifting, the first 18 mm of the label are not printable. These measurement corresponds to the distance between print head and cutter. The output volume is at its maximum level. (The offset of the zero-line is caused historically and serves the compatibility of older printer models).

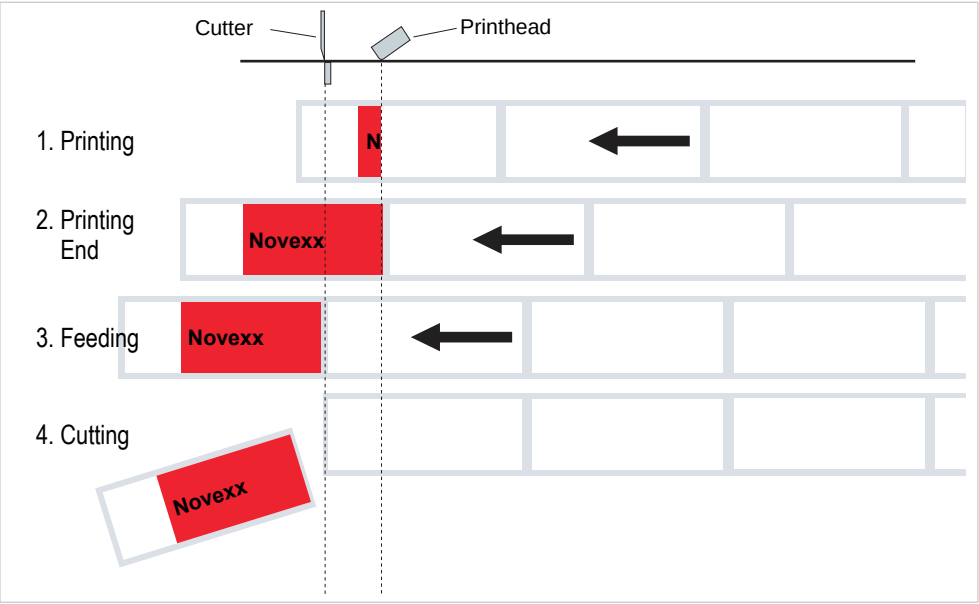


Fig. 38: Printing process in Normal 1:1 mode (schematic).

Cut speed

‖ Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”) ‖

Setting range	Default setting	Step width	Easy Plug
[2...12]	3	1	#PC1015

The cut speed is to be adjusted to the material thickness and strength.

- 2: Extremely slow; for thick and strong material
- 8: Extremely fast; for thin material

Cut width

‖ Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”) ‖

Setting range	Default setting	Step width	Easy Plug
XLP 604: [25...120]	106	1	#PC1016, #CW

‖ The setting value indicates the cutting width in millimetres. However, deviations may occur depending on the cutting speed and material properties. It is recommended to determine the fine adjustment by testing. ‖

Cut position

‖ Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”) ‖

Setting range	Default setting	Step width	Easy Plug
[-5.0...5.0] mm	0 mm	0.1 mm	#PC1017

The cut position is identical to the detected gap position, i. e. with the start of the label. This parameter can be used for fine settings to meet specific customer requirements.

- Maximum offset in feed direction: -5.0 mm
- No offset: 0 mm
- Minimum offset against feed direction: +5.0 mm

Double cut

‖ Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”) ‖

Setting range	Default setting	Step width	Easy Plug
[0.0...5.0] mm	0.0 mm	0.1 mm	#PC1018, #ER

Joining grids or the gap area between the labels can be removed using a double cut, thereby improving the outline.

The first cut is offset by the distance set from the recognized gap position away in the feed direction, the second cut is made at the gap position.

A possible correction of the cut position ("Cut position" function) is calculated for both cuts and must be taken into consideration.

Normal simple cut: 0.0 mm

Rest position

Settings	Default setting	Step width	Easy Plug
at head, at cutter	at head	--	#PC1041

‖ Only with mounted and activated cutter (Options > Selection > Periph. device = “Cutter”). ‖

To avoid that the label material is wrapped around the print roller after a long idle time, the material rest position can be changed to „at cutter“.

- *at head*: The material rest position in idle times is at the print head
- *at cutter*: The material rest position in idle times is at the cutter to avoid material being wrapped around the print roller

Ribbon autoecon.

(Ribbon automatic economy)

Setting range	Default setting	Step width	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.

- *On*: Ribbon automatic economy mode is on
- *Off*: Ribbon automatic economy mode is off

Head down lead

> Only with activated ribbon automatic economy mode (Print > Material > Ribbon > Ribbon autoecon. = “On”).

Setting range	Default setting	Step width	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.

Ribb. eco. limit

(Ribbon economy limit)

> Only with activated ribbon automatic economy mode (Print > Material > Ribbon > Ribbon autoecon. = “On”).

Setting range	Default setting	Step width	Easy Plug
[20..100.0] mm	10.0 mm	0.1 mm	#PC2019

The ribbon economy limit determins 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 width	Easy Plug
Head up, Head down	Head up	--	#PC2058

- *Head up*: The printhead is *lifted* during label material initialization and labelfeeding..

- *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 width	Easy Plug
None, Cutter, Rewinder, Tear-off edge, Dispenser, Intern. rewinder, LTMA	Tear-off edge	--	#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.
►

- *None*: No peripheral device is installed.
- *Cutter*: Sets the printer firmware to the cutter option. Selection permits access to the cut parameters.
- *Rewinder*: Sets the printer firmware to operate the external rewinder option. Selection permits access to the rewinder setting parameters.
- *Tear-off edge*: Sets the printer firmware to the tear-off edge option. The punch is fed forward to the tear-off edge.
- *Dispenser*: Activates the dispensing option (requires internal rewind option + dispensing edge).
- *Intern. rewinder*: Activates the internal rewind option (requires internal rewind option + deflection plate).
- *LTMA*: Activates both, the applicator and the dispenser options.

Ribbon feed adj.

Only appears in service mode

Setting range	Default setting	Step width	Easy Plug
[-20.0..20.0]%	0.0%	0.1%	#PC5103

Modifies the foil feed speed in comparison to the material feed speed.

- *Decreasing* the setting: Foil transport gets faster
- *Increasing* the setting: Foil transport gets slower

Rewind direction

(Rotation direction of the external rewinder)

Only with mounted and activated “Rewinder XLP” (Options > Selection > Periph. device = “Rewinder”).

Setting range	Default setting	Step width	Easy Plug
Printing inside, Printing outside	Printing outside	--	#PC1019

- *Printing inside*: Rewind direction: The printed label is facing *inside*.
- *Printing outside*: Rewind direction: The printed label is facing *outside*..

Rewinder Values

> Only with mounted and activated “Rewinder XLP” (Options > Selection > Periph. device = “Rewinder”).

No setting option - Only display	Easy Plug
	#!PG30074

Shows the values of the position sensor at the rewinder dancer arm in middle/tightened and in loose position.

```
Rewinder values
xxx <----- text ------> yyy
```

- xxx = Sensor value in *loose* position
- text = Sensor type (Opto = light barrier; Hall = hall sensor; ???? = no explicit sensor type)
- yyy = Sensor value in middle position

For setting details refer to the “User Manual Rewinder XLP”.

Rewinder adjust

> Only with mounted and activated “Rewinder XLP” (Options > Selection > Periph. device = “Rewinder”).

Setting range	Default setting	Step width	Easy Plug
--	--	--	#PC5123

For adjusting the dancer arm sensor on the “Rewinder XLP”. For details, see the user manual for the “Rewinder XLP”.

Cuts on knife

> Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”)

No setting option - Only display	Easy Plug
ⓘ	#!PG30020

Shows the total number of cuts done by one knife; other than parameter Tools > Service > Cutter change, it is not reset with cutter changes.

Cutter number

> Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”)

No setting option - Only display	Easy Plug
ⓘ	#!PG30017

Shows the number of exchanged cutters. The counter is increased by calling the parameter Tools > Service > Cutter change.

Cutter change

> Only appears in service mode
>
> Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”)

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

Increases the counter „Cutter number“ on the info printout “Service Status” by one.

See parameter ServiceStatus.

- *Yes*: Increases the counter "Cutter number" by one
- *No*: Doesn´t increase the counter

Cutter test

Makes it possible to test the cutter function without having to set the parameter Options > Selection > Periph. device to “Cutter”.

Triggers a cut, if a cutter is installed. Without a cutter nothing will happen. Prerequisite: Periph. device is set to “None”.

Total cuts

> Only with mounted and activated cutter. (Options > Selection > Periph. device = “Cutter”)

No setting option - Only display	Easy Plug
ⓘ	#!PG30023

Shows the total number of cuts done by one knife; other than than parameter Cuts on knife, it is not reset with cutter changes.

Start source

Settings	Default setting	Step width	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! ‖

Stroke length

Settings	Default setting	Step width	Easy Plug
[30..192] mm	190 mm	1 mm	#PC3153

‖ Only with installed and activated LTMA. ‖

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 width	Easy Plug
[0..399] mm	0 mm	1 mm	#PC3154

‖ Only with installed and activated LTMA. ‖

‖ Only works with the setting Options > LTMA > Apply mode = “After start sig.”. ‖

- Waiting position *not* activated: The applicator foot waits in front of the dispensing edge (home position) for the start signal.
- Waiting position activated: 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 width	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.

MQTT broker

‖ Only appears in service mode ‖

Setting range	Default setting	Step width	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 width	Easy Plug
[0...255] [42]	192.168.1.100	--	#PC1538

IP address of the MQTT broker which is to be used.

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.

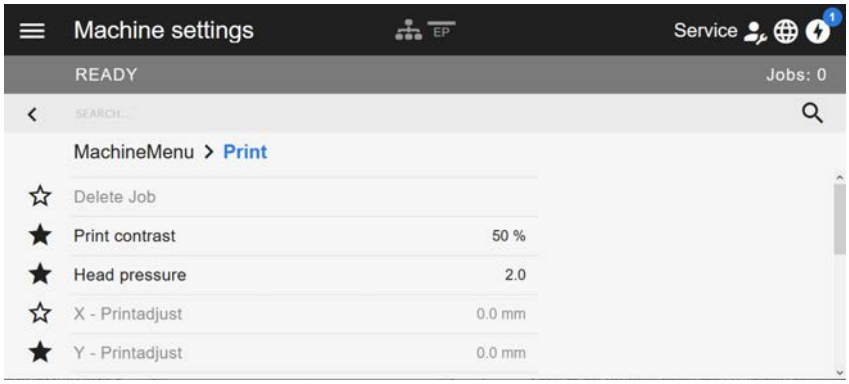


Fig. 39: Machine settings view in the web panel. The stars to the left of the parameters mark the favorites. Filled star = parameter selected for favorites menu.

► 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`).

42 for each xxx-value in xxx.xxx.xxx.xxx

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.

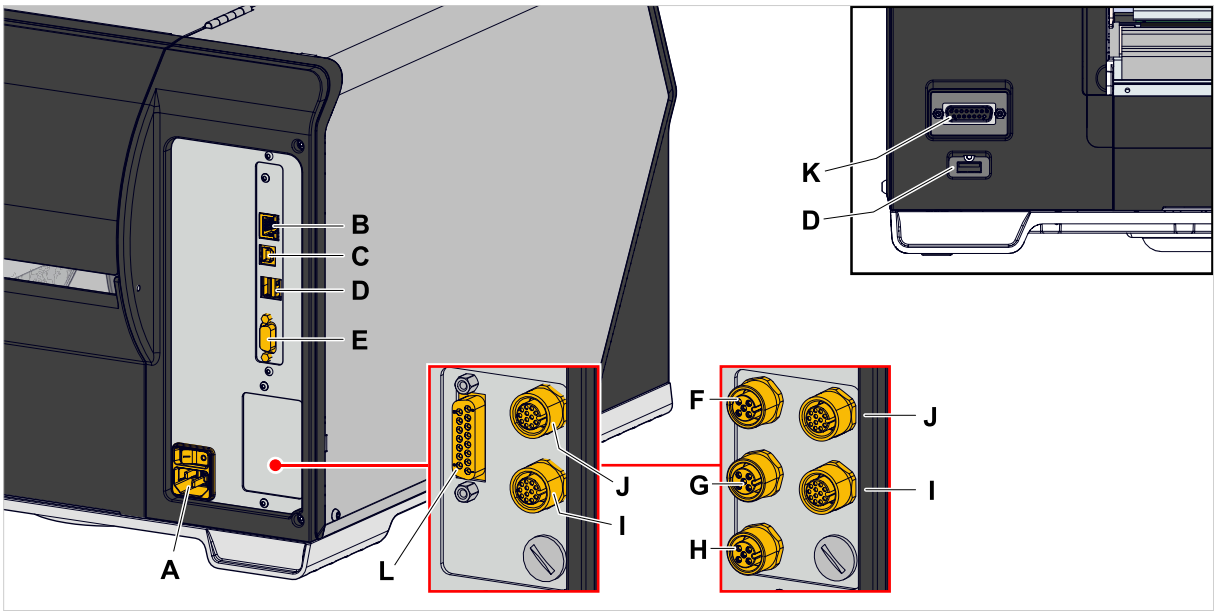


Fig. 40: Connections at a XLP 60x “Peripheral”, optional with “BasicIO” (F-H) and “8IO” (I, J) or with “Basic-USI” (L) and “8IO” (I, J) interface boards.

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 device interfaces	Used to transfer print jobs from a host (for example a PC); transfer firmware; read service data
D	USB interface type A (host) (2x rear side, 1x front)	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	(Optional) BasicIO board	Connector for a start sensor (standard industrial sensor, e.g. Novexx N102106 or N102109 or foot switch N103110), triggers the printing dispensing cycle. Signal inputs and outputs for controlling the printer or for system integration (4 inputs, 4 outputs)
G		
H		
I	(Optional) 8IO board	Signal inputs and outputs for controlling the printer or for system integration (8 inputs, 8 outputs)
J		
K	(Optional) Periphery interface	Connector for peripheral devices (e. g. Cutter)
L	(Optional) Basic-USI board	Signal inputs and outputs for controlling the printer or for system integration (4 inputs, 7 outputs)

Related tasks

Connecting to the mains power supply on page 129

Related reference

Connecting to a data host on page 130

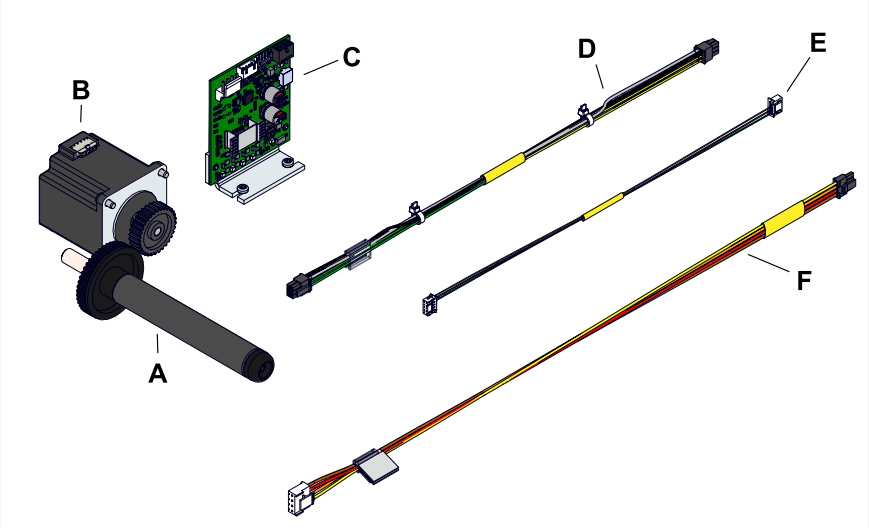
Commissioning

INSTALLATION OF OPTIONS

Installing the ribbon saving Function

Before you begin

Requirements: Ribbon saving retrofit kit (XLP 604: N103104, XLP 605/606: N103461)



A	Ribbon roller
B	Motor with mounting screws
C	Stepper motor output stage board with mounting screws
D	CAN bus connection cable (N101806)
E	CLK2/DIR2 cable (N102768)
F	Motor connection cable (N103211)

Tools:

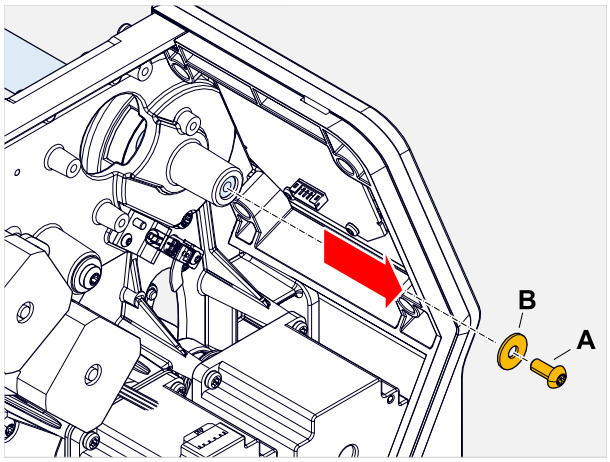
- Torx screwdriver Tx20, Tx25
- Flat-tip screwdriver medium size, approx. 5 mm

Procedure

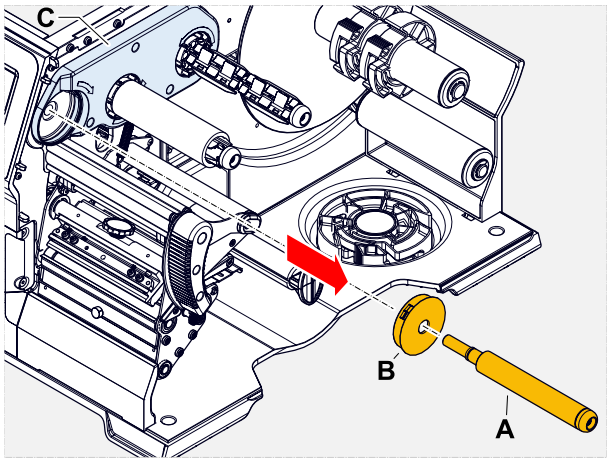
Removing the ribbon roller:

1. Switch off the printer. Disconnect the mains cable.
2. Remove the rear cover.

3. Unscrew screw A and remove washer B:



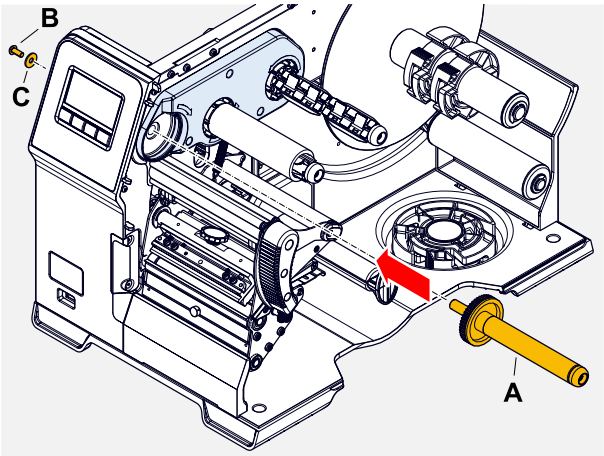
4. Pull out the roller with axle (A).



5. Lever the cover cap (picture above, B) out of the cover (C) with a screwdriver.

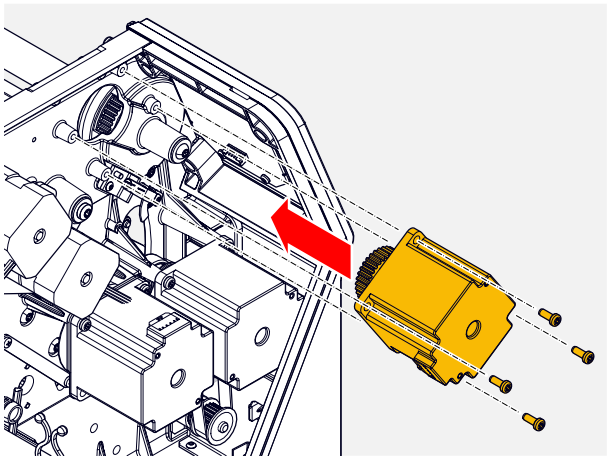
Installing the ribbon saving parts:

6. Insert the ribbon roller with gear wheel (A) from the retrofit kit into the hole in the base plate and fix it on the opposite side (screw B, washer C).



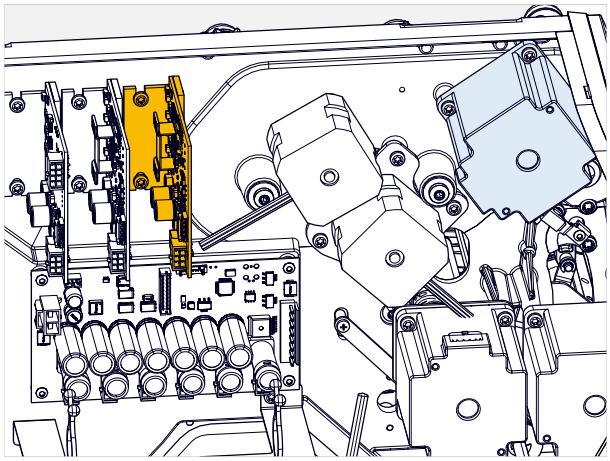
7. Screw the motor on as shown:

   ‖ The teeth of the motor pinion must engage with the teeth of the gear wheel on the foil roller. ‖



8. Screw on the output stage board:

> Depending on the configuration of the printer, the board can also be screwed to a different free position than the one shown.



Wiring:

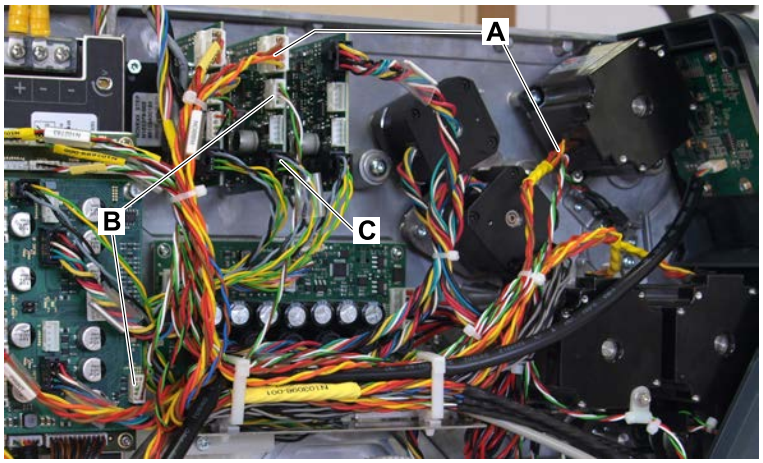
9. Connect the cables as pictured:

> The stepper motor output stage for the ribbon motor is in the middle position in the photo.
> For more details refer to the wiring diagram.

A Motor connection cable (N103211)

B CLK2/DIR2 cable (N102768)

C CAN bus connection cable (N101806)



10. Fix the cables so that they do not touch any moving parts.
11. Refit the rear cover.
12. Switch on the printer.
13. Activate ribbon saving: Print > Material > Label > Ribbon autoecon. = “On”.

Related tasks

Rear hood replacement on page 233

Related reference

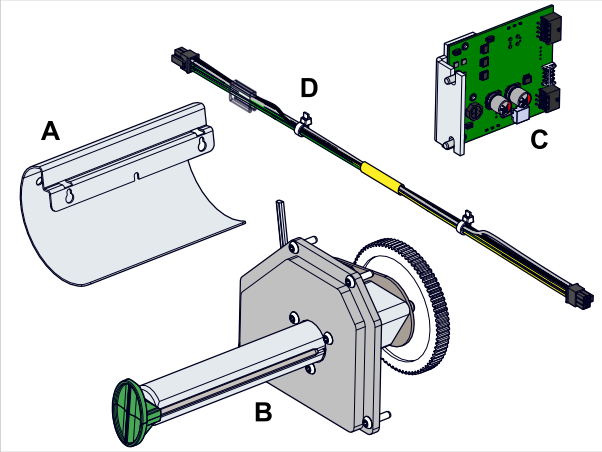
Wiring Diagram on page 220

Internal Rewinder Installation

Before you begin

Prerequisites:

- XLP 60x “Basic” or “Peripheral”
- Retrofitting kit Internal Rewinder (XLP 604: N103477; XLP 605/606: N103483)



A	Baffle plate
B	Rewinding module
C	Output stage BLDC motor
D	Cable for board supply and CAN bus

Tool:

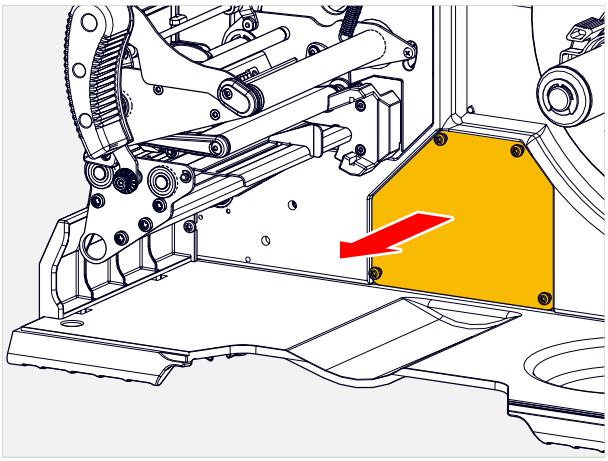
- Torx screwdriver Tx10, Tx20

Procedure

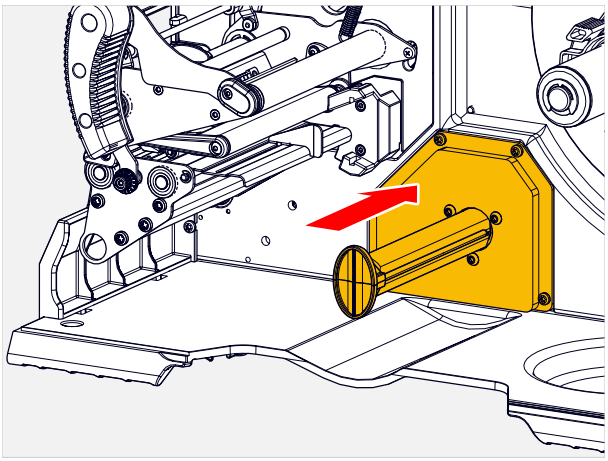
Installing the rewinding module:

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear cover.

3. Unscrew the cover plate from the printer partition (4 screws).:



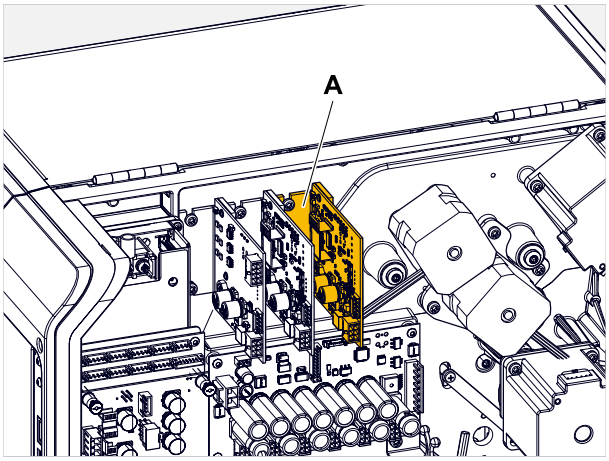
4. Insert the rewinding module through the recess in the partition wall and screw it tight (4 screws).:



Installing the output stage board:

5. Screw on the output stage board (A) with two screws as shown.

> Depending on the equipment of the printer, 1-3 mounting places are free for output stage boards.



Connecting:

6. Connect the output stage board and the rewinder motor according to the wiring diagram (see link below).
7. Secure all cables so that they do not touch any moving parts.
8. Reattach the rear hood.

Installing the baffle plate:

9. Screw on the baffle plate (see link below).

Settings in the parameter menu:

10. Set parameter Options > Selection > Periph. device to “Internal Rewinder”

Related tasks

Rear hood replacement on page 233
Installing the baffle plate on page 128

Related reference

Wiring Diagram on page 220

Dispensing Function Installation

Before you begin

Prerequisites:

- XLP 60x “Basic” or “Peripheral”
- Retrofitting kit according to the table:

Printer	Retrof. kit M	Retrof. kit A
XLP 604 “Basic”	N103525	--
XLP 604 “Peripheral”	N103523	N103521
XLP 605/606 “Basic”	N103529	--
XLP 605/606 “Peripheral”	N103527	N103911

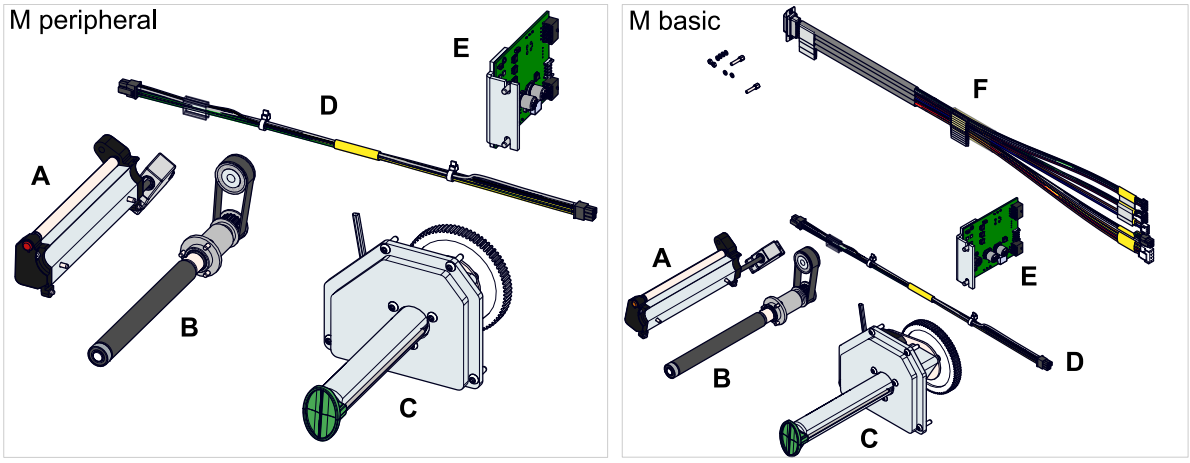


Fig. 41: Contents of retrofitting kit “M” for XLP 604 “Peripheral” and for XLP 604 “Basic”.

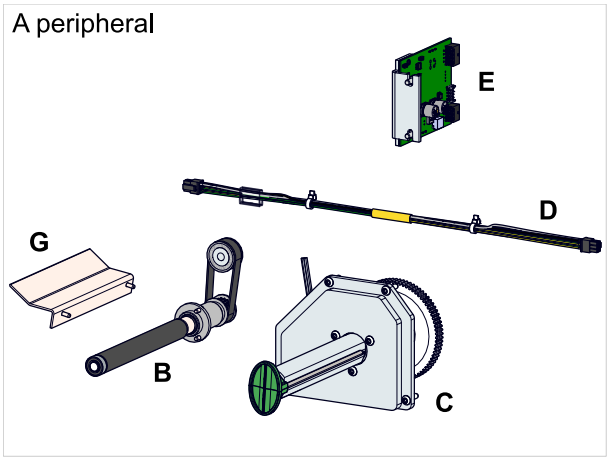


Fig. 42: Contents of retrofitting kit “A” for XLP 604 “Peripheral”.

A	Dispensing edge, M type
B	Backing paper draw roller
C	Rewinding module
D	Cable for board supply and CAN bus
E	Output stage BLDC motor
F	Cable harness for peripheral device connection
G	Dispensing edge, A type

Tools:

- Torx screwdriver Tx10, Tx20
- Socket spanner SW 5
- Hex socket screwdriver 2 mm

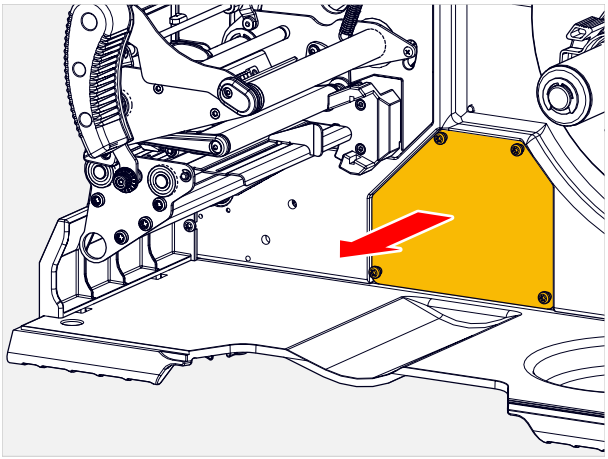
About this task

If an XLP 60x “Basic” or “Peripheral” is to be extended by the dispensing function, an internal rewinder and a dispensing edge (M or A type) must be installed. The XLP 60x “Basic” must also be extended by the internal cable harness with Sub-D connection for peripheral devices.

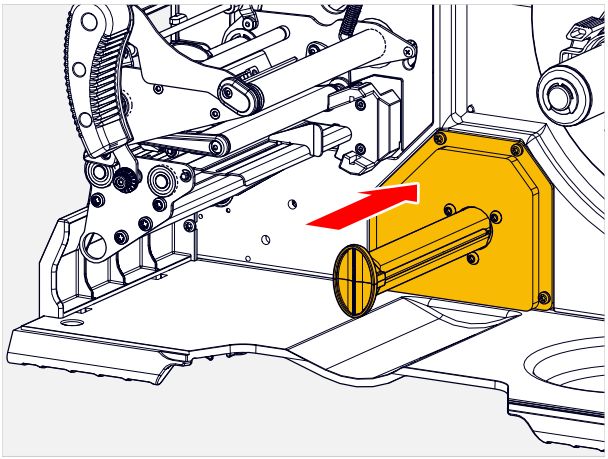
Procedure

Installing the rewinding module:

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear cover.
3. Unscrew the cover plate from the printer partition (4 screws).:



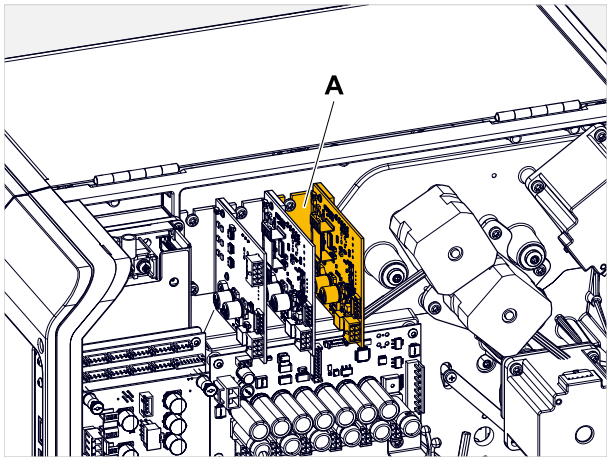
4. Insert the rewinding module through the recess in the partition wall and screw it tight (4 screws).:



Installing the output stage board:

5. Screw on the output stage board (A) with two screws as shown.

> Depending on the equipment of the printer, 1-3 mounting places are free for output stage boards.



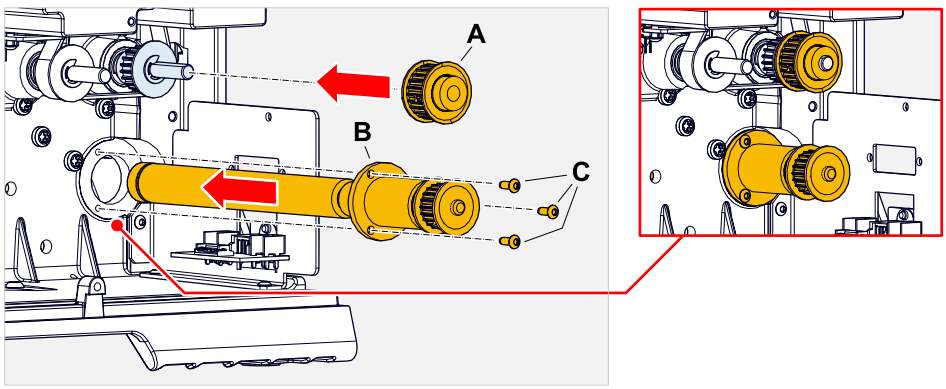
Connecting:

6. Connect the output stage board and the rewinder motor according to the wiring diagram (see link below).
7. Secure all cables so that they do not touch any moving parts.

Installing the backing paper draw roller:

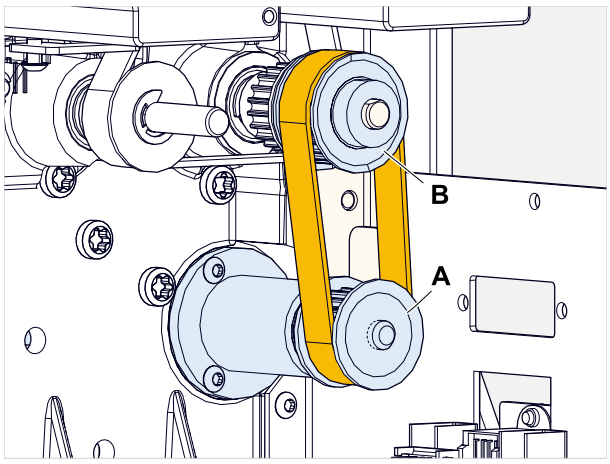
8. Remove the housing part on the front left side (contains the operation panel).
9. Mout the t-belt pulley (A) on the axle end of the print roller.

> Push the t-belt pulley onto the axle as far as it will go. Turn the pulley so that one of the two set screws sits over the surface on the axle.



10. Insert the draw roller through the opening in the partition wall and screw it on with the flange (picture above, B) (3 screws, picture above, C).

11. First place the t-belt over the lower t-belt pulley (A), then press it over the edge of the upper pulley (B).

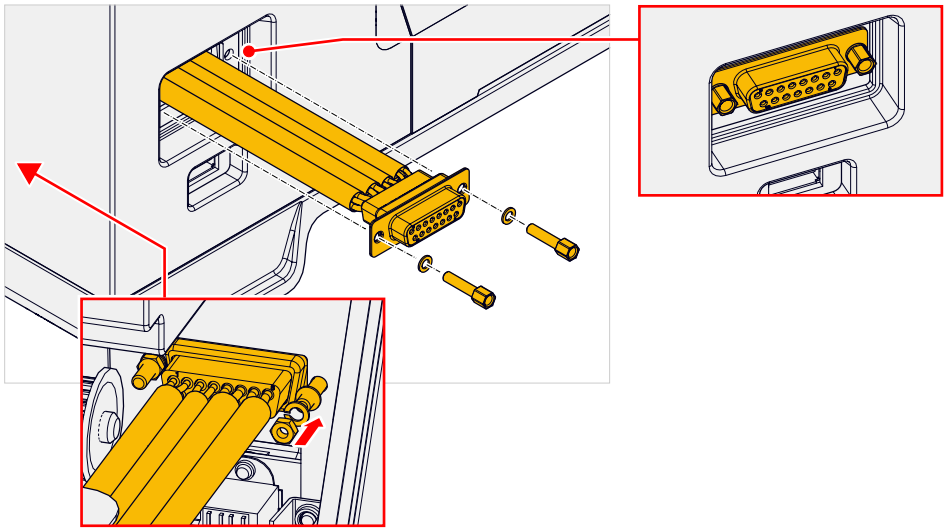


12. Reassemble the front left side housing part.

(XLP 604 “Peripheral” only) Installing the cable harness:

13. Guide the cable harness through the D-Sub installation opening.

14. Tighten the D-sub socket with 2 hexagonal bolts. Sequence on the inside: housing - washer - lock washer - nut.



15. Connect the periphery cable harness according to the wiring diagram (see link below).

16. Secure all cables so that they do not touch any moving parts.

17. Reattach the rear hood.

18. Attach the dispensing edge according to the separate description (link below).

19. Set parameter Options > Selection > Periph. device to “Dispenser”.

Related tasks

Rear hood replacement on page 233
Front left housing replacement on page 234

Installing the dispensing edge on page 127

Related reference

Wiring Diagram on page 220

Installing the dispensing edge

Before you begin

Prerequisites:

Printer: XLP 60x “Peripheral” or XLP 60x “Basic” with dispensing option

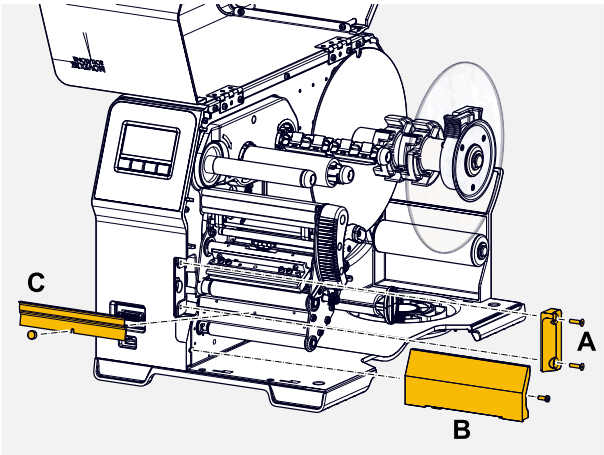
Tool: Torx screwdriver Tx10

About this task

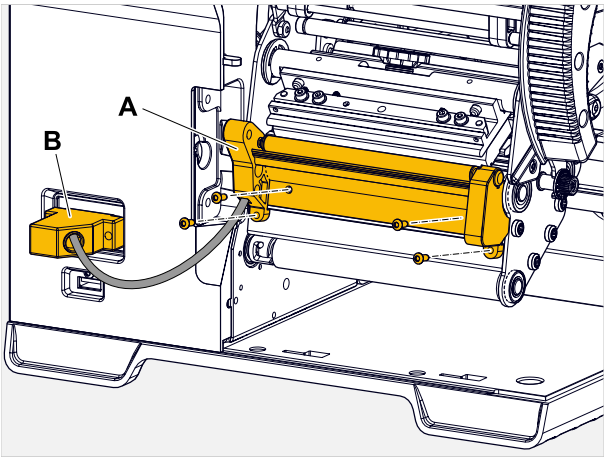
If the XLP 60x is used as dispenser, a dispensing edge has to be installed in addition to the rewinder as follows.

Procedure

1. Remove flange cover (A), front bottom housing (B) and tear-off edge (C).



2. Fasten the dispensing edge (A) using 4 screws (2x M3x8, 2x M3x6).



3. Connect and tighten the plug (B) of the dispensing edge sensor.

Installing the baffle plate

Before you begin

Prerequisites:

XLP 60x “Peripheral” or XLP 60x “Basic” with internal rewinder

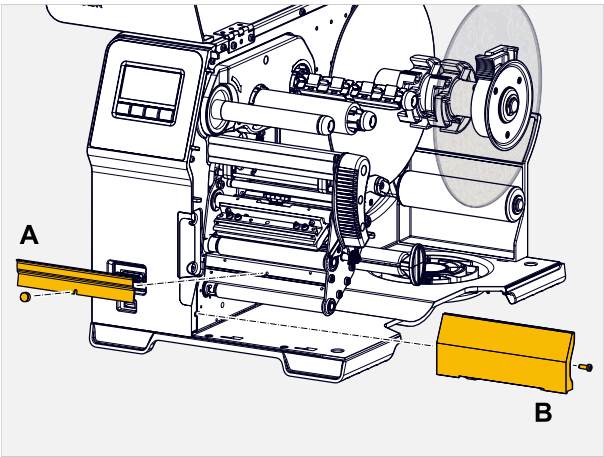
Tool: Torx screwdriver Tx10

About this task

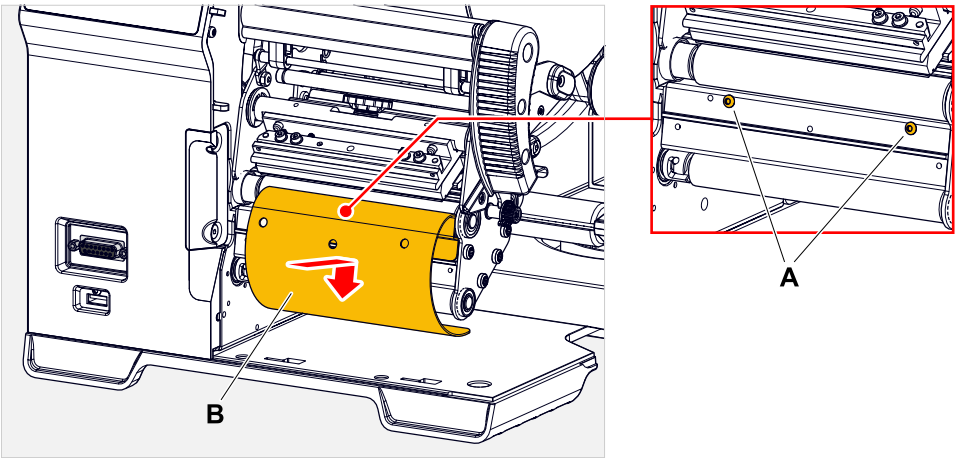
If the XLP 60x is to be operated with an internal rewinder, a baffle plate must be fitted in addition to the rewinder, as described below.

Procedure

1. Remove the front bottom housing section (B) and the tear-off edge (A).



2. Lightly turn in the two fastening screws (2x Torx M3x4) for the baffle plate by approx. two turns (A)



3. Attach the baffle plate with the button holes of the baffle plate to the protruding screws (picture above, B).
4. Tighten the screws through the openings in the baffle plate.

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.

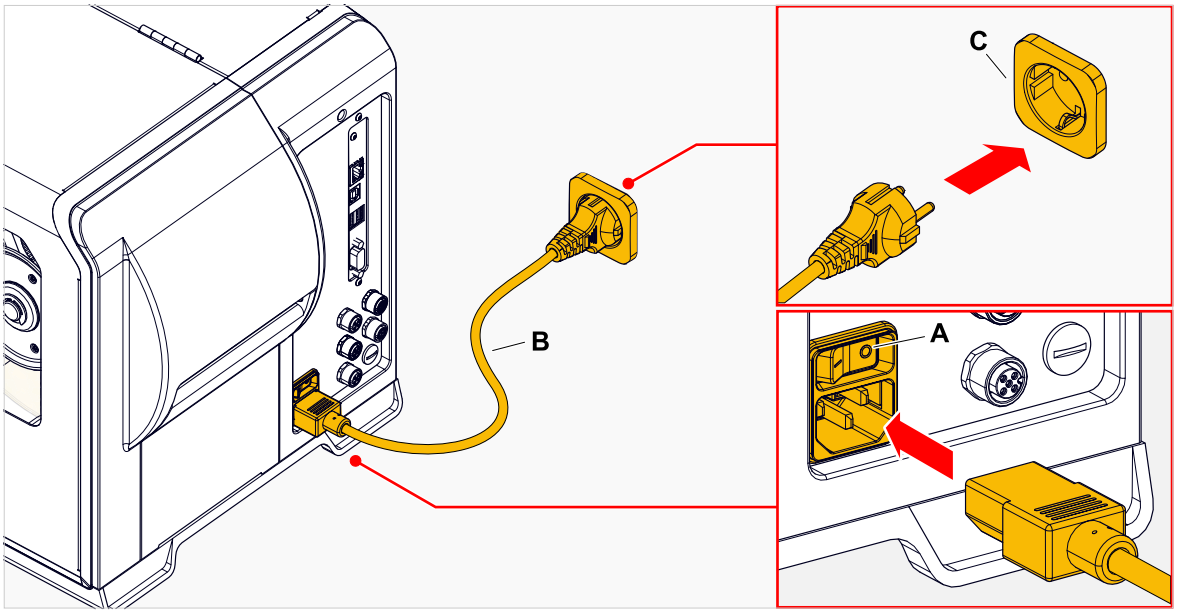
► Only operate the machine at the mains voltage given on the type plate.

► 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 (picture above, C) using the provided mains connection cable (picture above, 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. Pull off the cable at the plug.

Related reference

Connections on page 113

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.

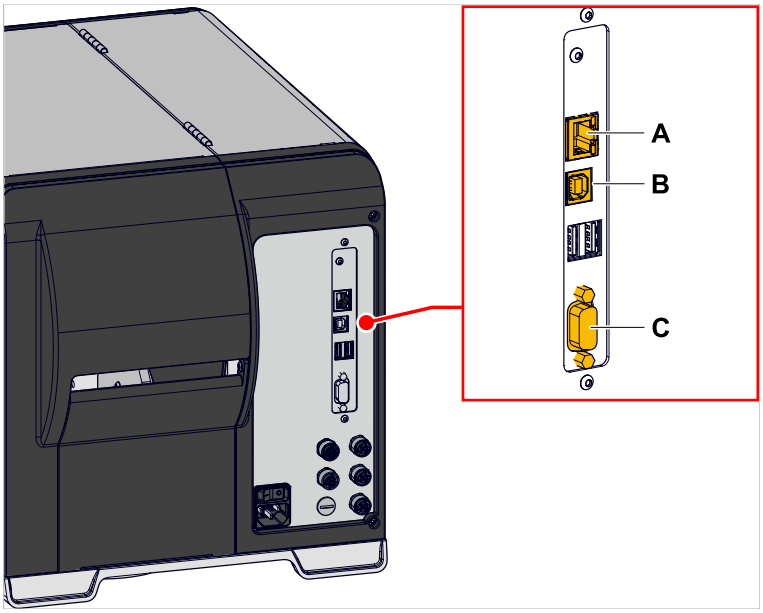


Fig. 43: Data interfaces at the XLP 60x (**A** Ethernet, **B** USB, **C** RS 232).

► 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 113

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.

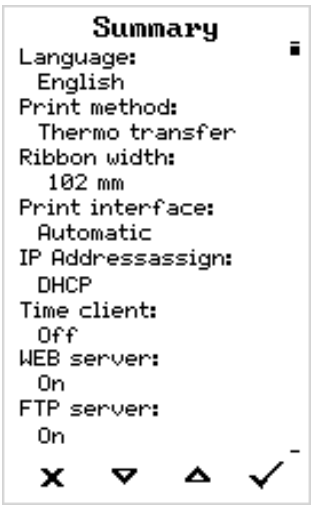


Fig. 44: Summary of the settings done by the wizard (Example, merged by image processing, in fact it must be scrolled to see all lines).

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)

Related reference

Overview Setup Wizard on page 276
Overview of the parameters queried by the setup wizard.

Special Functions

STANDALONE OPERATION

Requirements and Function

Requirements

- *External memory medium* (USB thumb drive)
- *Computer*, to write on the memory medium
- (Optional) *Keyboard*, simplifies entry of variable data

Keyboard type	Order no.
USB-keyboard without numeric keypad, German layout	A8407
USB-keyboard without numeric keypad, US layout	A8406

Table 19: Keyboards available as accessory.

► The matching keyboard layout is set with parameter Options > Keyboard.

‖ Before first use, check if the intended keyboard really works with the printer. ‖

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 20: 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

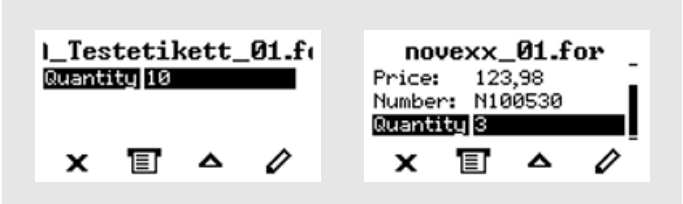
- The file is stored on an external memory medium (e. g. USB thumb drive) in folder `\FORMATS`
- The file has one of the extentions `.for` (print job or setup file) or `.tar` (firmware)
- Drive letter `C:` must be assigned to the storage medium (that is, Print interface > Drives > Drive C must be set 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 24
Describes in general terms the input of data at the control panel, which may be required in various environments.

Functions with external 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
F5	1	Depends on context
F6	2	
F7	3	
F8	4	
Strg + Entf	none	Delete the current print job
Strg + Einfg	2 + 4	Toggle between normal and standalone mode

Table 21: 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 extention `.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 print-jobs, 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 extention `.tar` are interpreted as printjobs.

EXPERTS Selecting a firmware file means starting a firmware download. As this is a fundamental intervention to the system, firmware files are not executed immediately.

–

Automatic file execution

If a file named `DEFAULT.FOR` [43] exists on the memory medium in the folder `\FORMATS`, it is executed automatically at system start.

> If a file `\AUTOSTRT.FOR` [44] is also existing in the root directory, it will be executed first. But be aware that standalone 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.

EXPERTS 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 extention must be `*.FOR`!
   >
   > Filename lettering is *not* case sensitive!

3. Switch off printer.
4. Connect the external memory medium to the printer.

43 All letters lower case or all upper case; „Default.for“ doesn´t work

44 Not case-sensitive

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. 45: 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:

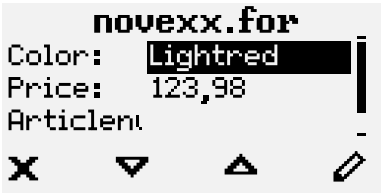


Fig. 46: Example “novexx.for” after start.

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> [45]
- <CR><LF>
- <LF> [46]
- <LF><CR>

> Data received at the interface are processed *only then*, if the printer is switched to standalone operation.

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
```

45 <cr> = 0x0D

46 <lf> = 0x0A

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 qu-antity „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

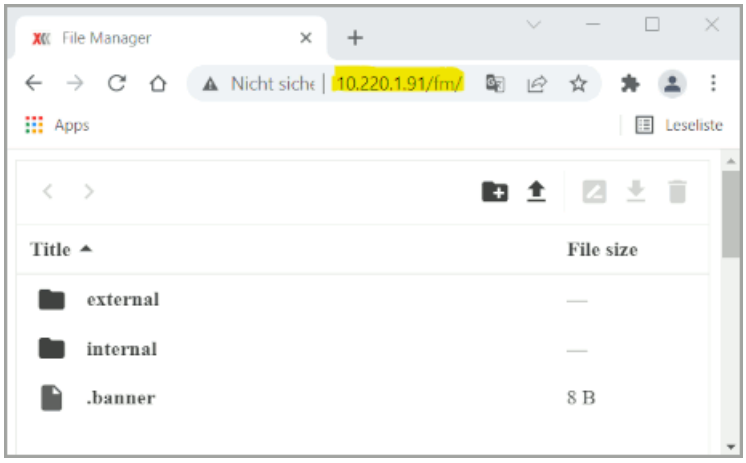
1. Start the web browser.
2. Enter the IP address of the machine followed by `/fm` (**f**ile **m**anager) in the address field of the web browser.
   A query dialog for user name and password appears:

3. 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 [47] 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.

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.

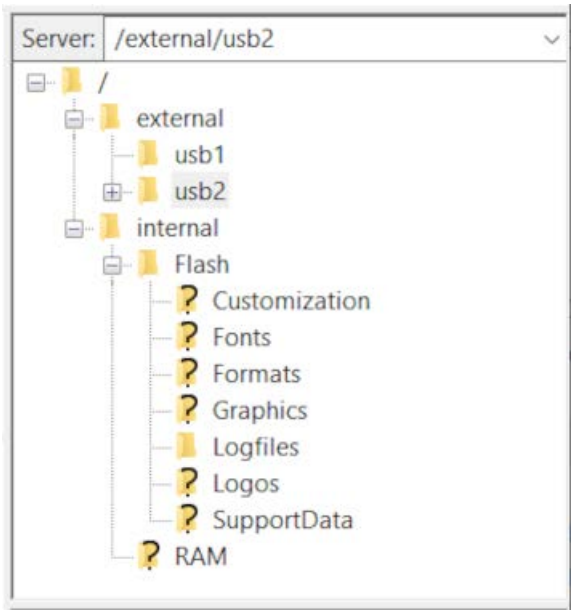
47 FTP = File Transfer Protocol

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:



Related reference

Key combinations and key codes for service on page 277

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 NOVEXX standard folders can be copied. If another folder is selected, a message will briefly appear informing you that this is not a standard folder.

Procedure

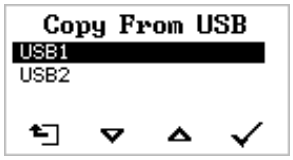
1. Connect the USB stick to one of the USB interfaces.

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).

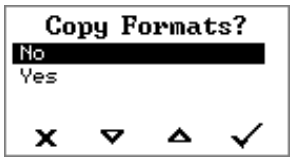


4. Select one of the listed directories in the Select Dir dialog.

   With the command Copy All (at the end of the folder list) all (NOVEXX standard) folders can also be copied at once.

5. 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

1. Call Tools > Internal Flash > Delete Dir.

2. Select directory to be deleted:

   In the figure, the directory “Formats” is selected; to delete all directories, select Delete All.

3. 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.

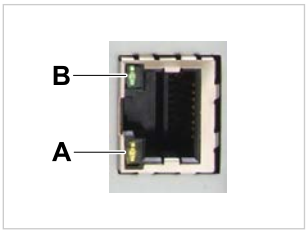


Fig. 47: Yellow (A) and green (B) LED at the Ethernet interface.

Mbit/s	Yellow	Green
10	X	X
100	X	
1000		X

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” (see chap. Clear parameters on page 151).

CAUTION! - Save the machine settings in a setup file beforehand (see chapter Save all machine settings on page 148) 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: nxx-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”.
	IP address Net mask Gateway address	IP parameter input fields, in case “Fixed IP address” was set for the address assign type.

Table 22: 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 23: 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).

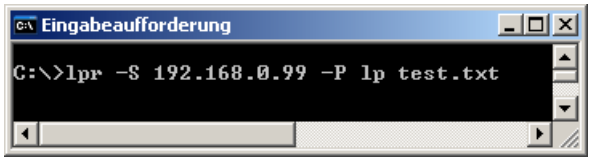


Fig. 48: Sending a print job with the “lpr” command.

‖ 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 adviseable 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

  Default file names:

  - `SETUPALL_XLP_604_.FOR` for storage option “With adjust para” (Example file see appendix)
  - `SETUP_XLP_604_.FOR` for storage option “Without adj. par”

Procedure

Saving via the operation panel:

1. (Optional) Plug in an external storage medium.
2. Switch on the machine.
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 75).
   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”:

   ‖ For details refer to Store Parameters on page 75. ‖

   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 24
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 33
Setup File on page 263

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. `SETUP_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

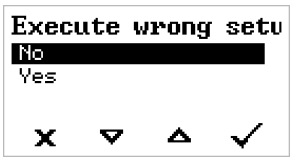


Fig. 49: Warning, if a wrong setup file was selected. The first line contains a scrolling text which shows a warning and afterwards the relevant file name. The answer in most cases should be “No”.

Procedure

Operation panel (standalone mode):

1. (Optional) Plug in an 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. The machine is then restarted.

(Alternatively) Automatic setup:

11. Save the setup file as `AUTOSTRT.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 134

Related reference

Administration view on page 33
Setup File on page 263

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”.

> 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

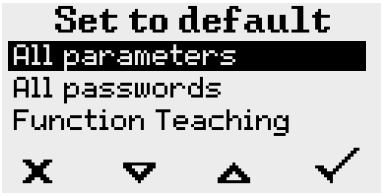
About this task

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.

Related tasks

Apply machine settings on page 150

Related reference

Key combinations and key codes for service on page 277
Machine does not start up on page 164

Reset key codes

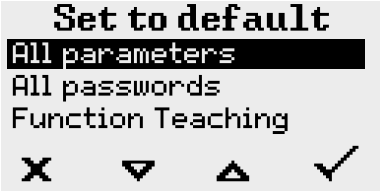
About this task

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 “Alle Passwörter” 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.

Related reference

Key combinations and key codes for service on page 277

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. In the parameter menu, change the setting that causes the error.
4. (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. ‖

5. Trigger restart of the machine (switch of/on or warm start).

Related reference

Key combinations and key codes for service on page 277
Machine does not start up on page 164

Assigning a board address

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.

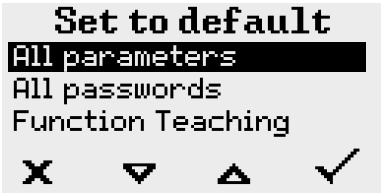
In the following, the procedure is shown using the example of two retrofitted 8IO boards.

> 8IO boards are not yet supported in the XLP 60x.
>
> There, this situation can still occur if 2 stepper motor output stage boards (periphery and foil saving) are installed at the same time. The procedure is the same, only the display for board selection looks different accordingly.

Procedure

Steps 1-4 are only necessary for subsequent reallocation. Normally the procedure starts with step 5 after the first power on:

1. (Optional) Trigger restart of the machine (switch off/on or warm start).
2. (Optional) While the machine is starting up, keep keys 1 + 4 pressed until the following selection window appears:



3. (Optional) Select “Function Teaching” and confirm with key 4

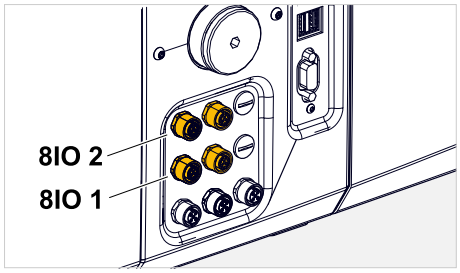
   > “Function Teaching” only appears if there are at least two boards of the same type for which no CAN addresses are stored (in the example, the subsequently installed 8IO boards)

   A window for requesting a key-code appears.

4. (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). The number in brackets is the MAC address of the board in question, which is currently flashing rapidly.

5. 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. ‖

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. 50: 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 Addressassign = “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 25

PRINTING WITH TEMPERATURE COMPENSATION

Description of function

The print contrast is highly dependent on the temperature of the print head. This is set via the parameter Print > Print contrast or during operation in the “Ready” view after pressing the ◑ key.

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.

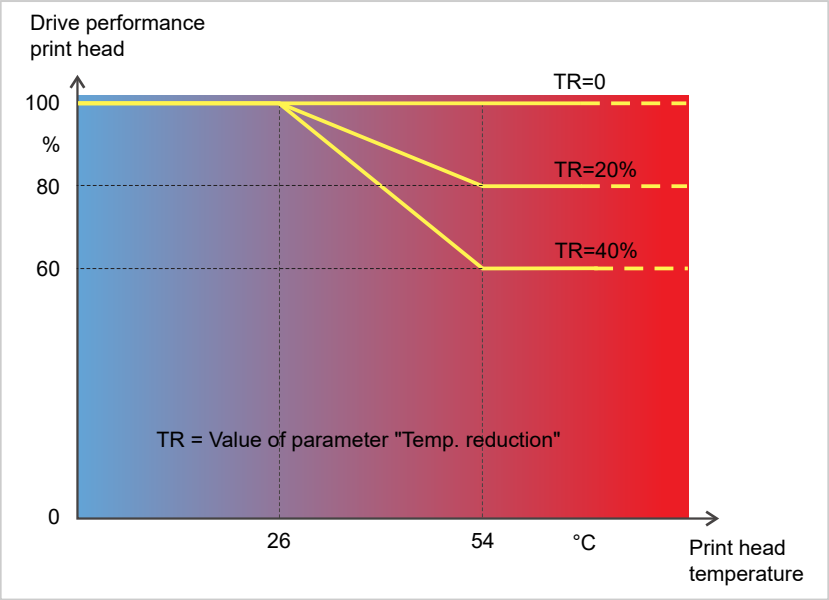


Fig. 51: With the parameter System > Print Control > Temp. reduction activated, the driving power of the print head – and therefore indirectly the print contrast – are reduced. Reduction starts at a temperature of 26°C. The maximum value is maintained at 54°C and above.

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

Related reference

Key combinations and key codes for service on page 277

Disturbances

GENERAL INFORMATION ABOUT STATUS REPORTS

Display of status reports

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:

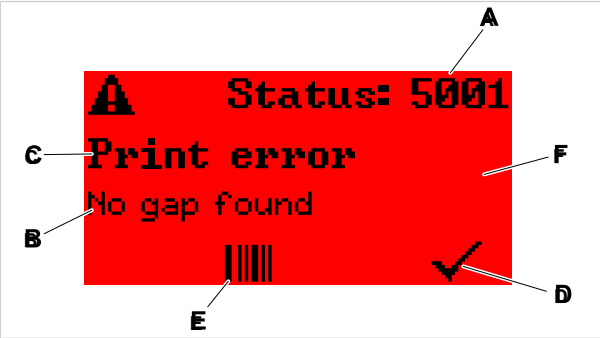


Fig. 52: Example for the appearance of status reports

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 165: In the example it is the message 5001 No gap found on page 188.
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 163).
F	*Background color* Possible background colors are: Red (error) and yellow (warning)

‖ The status can also be queried over the serial interface (see Easy Plug command #!Xn). ‖

Warnings

Background color = yellow

Warnings inform the operator about the occurance 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. 53: Example of a warning

USI warnings

There are also warnings that are triggered by the signal interface. These appear as an additional line of text on the display “Ready” (picture).

Fig. 54: Example of an USI warning: “Productstartwarn” .

Warning text	Cause
Productstartwarn	A new start signal has arrived during the previous print-dispensing process

Table 24: Possible warnings triggered by input signals.

USI warnings are only shown in the “Ready” display and can only be acknowledged there.

If several warnings occur simultaneously, they are saved in a queue.

Acknowledging USI warnings:

► Press keys 2+3.

USI status messages

These status messages are triggered by the signal interface. They provide information on whether certain signals are present.

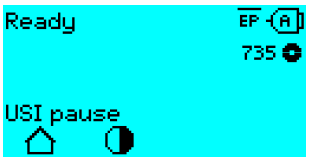


Fig. 55: Example of a USI status message .

Status message	Cause
USI pause	Signal `usi.pause` is active
USI feed	Signal `usi.feed` is active

Table 25: 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.

Error messages

Background color = red

Error messages must be acknowledged by the operator as the triggering event or fault endangers normal operation. A checkmark symbol can be seen in the bottom right corner of the message window above key 4. The message appears in the display until the fault has been rectified and acknowledged with key 4.

Blocking error messages are messages that occur as a result of serious errors. There is no checkmark symbol in the message window, i.e. the message cannot simply be acknowledged by pressing a key. The error state can only be terminated by a "warm start" (press keys 1+2+3) or by switching off the printer.

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

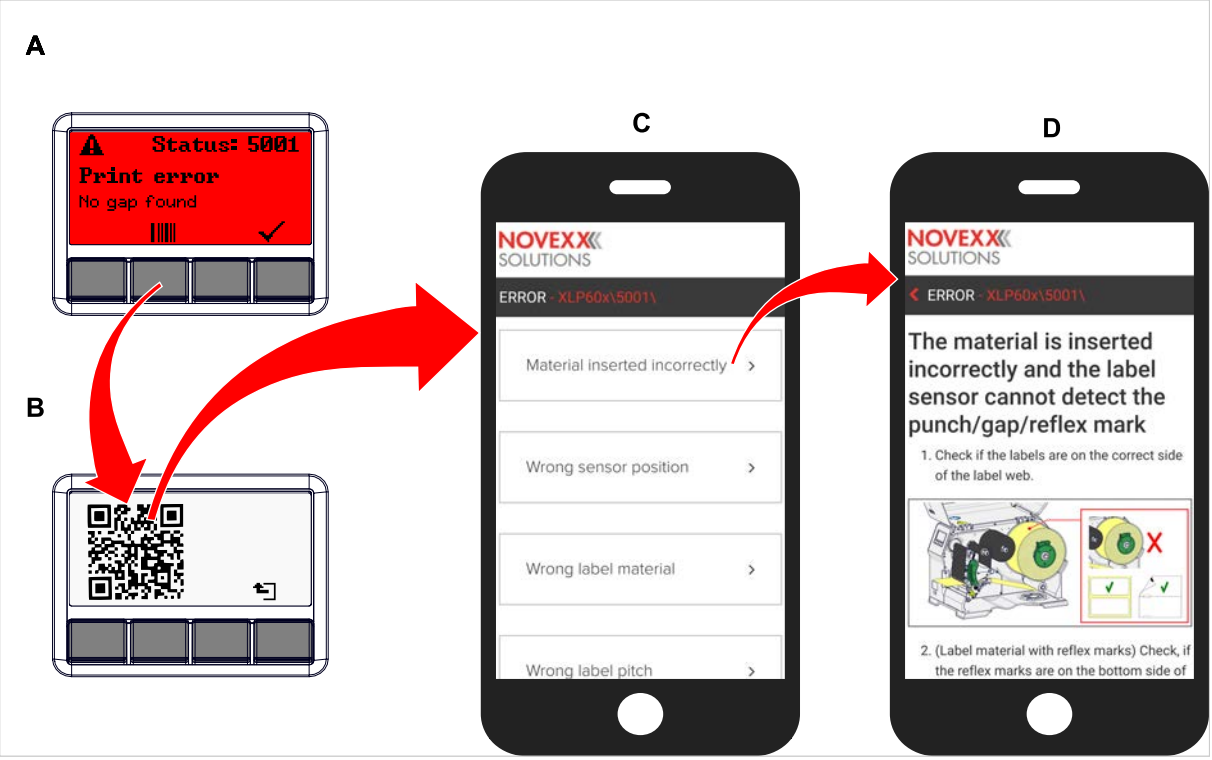


Fig. 56: If the error message has a barcode symbol (A), a QR code (B) can be used to call up troubleshooting instructions (C) on the smartphone.

> 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).

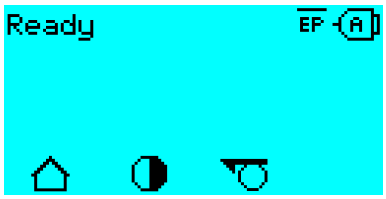
   > If several error solutions are displayed, they are sorted by relevance, i.e. the solution for the most probable error is at the top.
   >
   > For the time being, only English texts are displayed. Future firmware versions will also support other languages.

3. Touch one of the fault solutions.
   A troubleshooting guide is displayed.

COMMON DISTURBANCES

Machine does not start up

A regular start of the machine ends after the start-up with the display of readiness for operation:



If this condition is not achieved, this can have various causes:

Cause	Measure	Further information
Error conditions occur before the unit is ready for operation and can be eliminated.	► Eliminate the cause(s) of the error message(s).	After eliminating all error conditions, the machine is ready for operation.
Error conditions occur before the unit is ready for operation and can *not* be eliminated.	► Start machine without motor/sensor control (see link further below).	The “Bereit” display is reached. The parameter menu is accessible. There, the setting that causes the error can be changed.
The machine crashes during start-up.	► Clear parameters (see link further below).	

Related tasks

Machine start without motion control on page 153
Clear parameters on page 151

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 161.

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 161.

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 161.

1003 Too many slashes

General software error

► Please read the notes in section General software errors on page 161.

1004 Slash w/o param.

General software error

► Acknowledge by pressing the ✓ button.

► Please read the notes in section General software errors on page 161.

1005 2 same commands

General software error

► Acknowledge by pressing the ✓ button.

► Please read the notes in section General software errors on page 161.

1006 Letter incorrect

General software error: self-acknowledging

► Please read the notes in section General software errors on page 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

1027 Uninit parameter

Parameter could not be initialised.

► Acknowledge by pressing the ✓ key.

1028 Parameter uninit

General software error

► Acknowledge by pressing the ✓ key.

► Please read the notes in section General software errors on page 161.

1029 Param. incorr.

Incorrect parameter in the command.

► Check Easy Plug sequence.

► Please read the notes in section Easy Plug errors on page 161.

1030 Command incorr.

Error during the command interpretation.

► Check Easy Plug sequence.

► Please read the notes in section Easy Plug errors on page 161.

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 161.

1032 Incorrect char.

Parameter contains an invalid character.

► Check Easy Plug sequence.

► Please read the notes in section Easy Plug errors on page 161.

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 161.

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 161.

1035 Uninit combi

General software error. A combi parameter could not be initialized.

► Confirm by pressing the ✓ key.

► Please read the notes in section General software errors on page 161.

1036 Wrong combi para

General software error. A combi parameter could not be initialized.

► Confirm by pressing the ✓ key.

► Please read the notes in section General software errors on page 161.

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 161.

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 161.

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 occured while processing the function „seek“ in the internal file system of the printer.

► Confirm by pressing the ✓ key.

► Please read the notes in section General software errors on page 161.

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.

► Confirm by pressing the ✓ key.

► Terminate the print job with a #Q command.

1091 Wrong var field

An error occured 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 161.

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 161.

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 161.

1099 File end

General software error

► Please read the notes in section General software errors on page 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

1123 Rename logo

General software error

► Please read the notes in section General software errors on page 161.

1124 Logo file

General software error

► Please read the notes in section General software errors on page 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

1240 New FS>E

General software error

► Please read the notes in section General software errors on page 161.

1241 New Read Pointer

Faulty memory assignment for print jobs.

► Please read the notes in section Unspecific errors on page 162.

1242 New FE in job

Faulty memory assignment for print jobs.

► Please read the notes in section Unspecific errors on page 162.

1243 New delete order

Faulty memory assignment for print jobs.

► Please read the notes in section Unspecific errors on page 162.

1244 New wrong pos.

Faulty memory assignment for print jobs.

► Please read the notes in section Unspecific errors on page 162.

1245 New no space

Faulty memory assignment for print jobs.

► Please read the notes in section Unspecific errors on page 162.

1246 New HP no space

Faulty memory assignment for print jobs.

► Please read the notes in section Unspecific errors on page 162.

1247 Out of memory

Faulty memory assignment for print jobs.

► Please read the notes in section Unspecific errors on page 162.

1260 TimeDate string

General software error

► Acknowledge by pressing the ✓ button.

► Please read the notes in section General software errors on page 161.

1270 #-comm. invalid

General software error

► Please read the notes in section General software errors on page 161.

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 161.

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 sectionEasy Plug errors on page 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

1291 Draw field

Faulty Easy Plug code. Function call, drawing object, unsuccessful.

► Please read the notes in section Easy Plug errors on page 161.

1300 Invalid Command

General software error

► Please read the notes in section General software errors on page 161.

1301 Table full

General software error

► Please read the notes in section General software errors on page 161.

1310 Wrong Field ID

The error can have several causes.

► Please read the notes in section Unspecific errors on page 162.

1320 No Default Value

Faulty Easy Plug code.

► Please read the notes in section Easy Plug errors on page 161.

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 161.

1322 Logo Object

Faulty Easy Plug code regarding the declaration of a logo.

► Please read the notes in section Easy Plug errors on page 161.

1323 Line Object

Faulty Easy Plug code regarding the declaration of a line.

► Please read the notes in section Easy Plug errors on page 161.

1324 Rectangle Object

Faulty Easy Plug code regarding the declaration of a rectangle.

► Please read the notes in section Easy Plug errors on page 161.

1325 Truedoc Object

The error can have several causes.

► Please read the notes in section Unspecific errors on page 162.

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 161.

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 161.

1328 Var Field Creati

Faulty Easy Plug code regarding the declaration of a field.

► Please read the notes in section Easy Plug errors on page 161.

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 161.

1330 Create clk. field

General software error

► Please read the notes in section General software errors on page 161.

1331 Field type inv.

Invalid field type

► Acknowledge by pressing the ✓ key.

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 161.

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 ✓ key.

► Correct data.

► Please read the notes in section Easy Plug errors on page 161.

1335 #YV Field cont.

Content of the #YV field (variables data field) could not be pasted.

► Acknowledge by pressing the ✓ key.

► Please read the notes in section Easy Plug errors on page 161.

1336 #YV no. incorr.

#YV field (variables data field) with the given no. not found.

► Acknowledge by pressing the ✓ key.

► Check the number of the #YV field.

► Please read the notes in section Easy Plug errors on page 161.

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 161.

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 161.

1392 Job memory full

The error can have several causes.

► Please read the notes in section Unspecific errors on page 162.

1393 Job struct creat

The error can have several causes.

► Please read the notes in section Unspecific errors on page 162.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161 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 161 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 t he 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”,o,”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 spellling 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 realeased 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 ✓ key.

3001/3004/3007/3013/3016 Com x Parity

Receive error at the RS232 interface *COMx* (x = [1…5]).

► Acknowledge by pressing the ✓ key.

► 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 ✓ key.

► 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 ✓ key.

► 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.	EXPERTS ► 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.	EXPERTS ► Check the sensitivity setting of the label sensor.
Label sensor is defective.	EXPERTS ► 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 web is torn at one of the following places:

- (Printer with dispenser option) At the backing paper rewinder
- (Printer with “Rewinder XLP”) Between printer and external rewinder

► Acknowledge by pressing the ✓ key.

► Secure label material to the rewinder.

5005 Cutter

Fault on the cutter. The knife does not reach its home position.

► Check whether the cutter is soiled. If necessary, clean the knife.

EXPERTS ► Check the function of the knife. If necessary, readjust the knife.

► Acknowledge by pressing the ✓ key.

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 unwinding mandrel no longer rotates. This can have various causes:

Illustrated description for troubleshooting:
Click here or scan the QR code:

Possible causes	Solution
Ribbon roll is used up.	► Insert new ribbon roll.
Ribbon was inserted incorrectly.	► Remove the ribbon completely and insert it according to the winding diagram.
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. EXPERTS ► Adjust the spring plates on the ribbon unwinding mandrel so that the ribbon core is firmly seated.
Ribbon sticks to the print head.	**1.** Remove the ribbon. **2.** Clean the print head. **3.** Insert the ribbon newly.
Ribbon is torn.	► Insert the ribbon newly.

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 ✓ key.

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.

► Press the ✓ key to acknowledge.

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 ✓ key.

► 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 ✓ key.

► 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.

5140 Rewinder control

The (backing paper) rewinder rotates against expectation.

Possible cause	Solution
• No backing paper attached to the rewinder • End of backing paper not properly attached	► Insert material correctly
Backing paper is sagging in front of the rewinder to such an extent that it cannot be tensioned by the rewinder within 10 seconds	► Insert material correctly ► Turn the rewinder by hand until the backing paper is taut
Backing paper tear during printing	► Reattach the backing paper to the rewinder

5145 Rewinder full

The rewound backing paper has reached the maximum admissible diameter.

► Empty the rewinder.

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.

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
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.

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 161.

5501 General

General software error

► Please read the notes in section General software errors on page 161.

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 press the ✓ key – possibly the value is faulty.

► Confirm error by pressing the ✓ key. 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 by pressing the ✓ key. 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:

Refer to the service manual, chapter Machine start without motion control on page 153.

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 161.

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 by pressing the ✓ key. 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 ✓ key.

► 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 161.

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 ✓ key.

► Check designationexistence of the work directory.

6205 Write disk

Error during writing on RAM disk or external memory medium.

► Acknowledge by pressing the ✓ key.

6206 Read disk

Error during reading from RAM disk or external memory medium.

► Acknowledge by pressing the ✓ key.

6207 No file card

No external memory medium found.

► Acknowledge by pressing the ✓ key.

► 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 ✓ key.

► 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 pull (control unit of the draw roller)
- TPH power (distribution board)
- BasicIO (board)
- 8IO 1 (board)

Possible error causes:

Error cause	Meaning	Solution
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.	► 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 ac-
cess
```

Also refer to chapter Clear parameters on page 151.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 161.

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 ± 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 ✓ key.

► 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 161.

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 161.

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 ✓ key.

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 extention 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 extention 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 compact-flash 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 161.

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 occurence 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 161.

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 161.

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 161.

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 161.

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 by pressing the ✓ key. 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 by pressing the ✓ key. 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.

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 161.

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 software 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 162.

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 .

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 > EasyPl. file log).

► Repeat operation. If the error occurs repeatedly: switch off the file logging.

► Use parameter Tools > Diagnostic > EasyPl. file log only for error analysis purposes. Using the parameter in continous 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.

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.

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.

SUPPORT DATA

Diagnostic dump

For diagnostic purposes the machine offers the possibility to generate diagnostic data and store it in the internal flash memory. In this way, the last device-internal communication can be recorded and analyzed, just like in the black box in an aircraft. This function is very useful for tracing the cause of malfunctions.

DD = diagnostic dump

> A maximum of 10 DDs can be stored in the flash memory. If more DDs are stored, older DDs will fall out of the memory.
>
> DDs remain in flash memory when the machine is turned off.

Generating a diagnostic dump

Automatically:

DDs are automatically saved if the machine has entered an undefined state. This is the case, for example, when...

- printing suddenly stops
- the status message “unmanaged interrupt” appears on the display
- the machine suddenly doesn´t react on keystrokes any more

Manually:

DDs can be generated manually at any time during operation:
► Press all 4 keys of the operation panel simultaneously.

Alternatively:

► Access the administration view in the web panel.

► Click on “Generate diagnostic dump”.

Storing a diagnostic dump

Each DD is automatically stored in a log file in the internal flash memory of the machine (picture below). The file name contains the machine type and the storage date and time:

The default file name corresponds to the following scheme:

`SupportData_xxx_xxx_yyy_zzzzzzzzzzz.zip` with

- `xxx_xxx`: Machine type, e. g. XPA_934
- `yyy`: Printhead resolution, if the machine type is available with different resolutions (e.g. 300dpi), otherwise the field is omitted
- `zzzzzzzzzzz`: Serial number of the CPU board, if the board has a serial number, otherwise the field remains empty
- `dd.mm.yyyy`: Date (dd=Day, mm=Month, yyyy=Year)
- `hh.mm`: Time (hh=Hours, mm=Minutes)

Example: `Diagnose_XPA934_07.02.2020_12.39.log`

Individual log files can be read out using an FTP client.

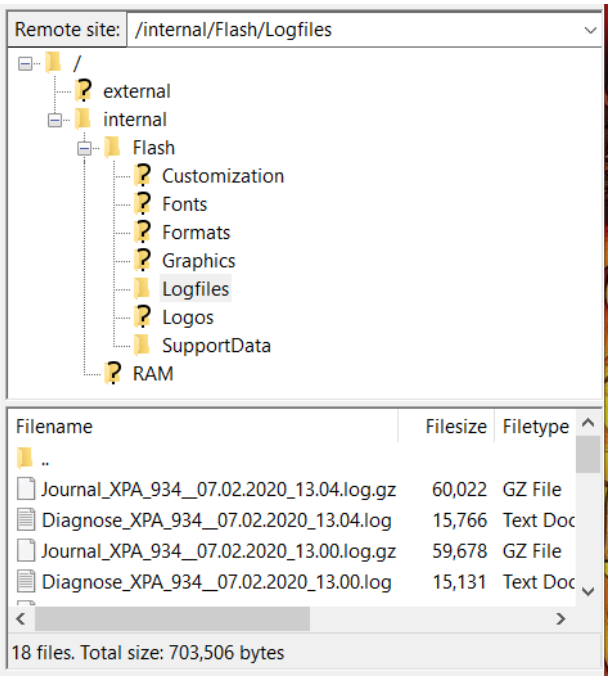


Fig. 57: Log files in folder `/internal/Flash/Logfiles`.

It is easier to create a complete set of support data and save it as a ZIP file (support file) on an external storage medium (see link "Save support data" below). The file thus created then contains the DD log files and other files with important troubleshooting information.

Related tasks

Save support data on page 212
Memory access with the file manager on page 141

Related reference

Administration view on page 33

Save support data

Describes how to save various support data in a ZIP file ("support file").
The support file contains important information for technical support for error analysis (including the latest diagnostic dumps).

The support 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 `\SupportData`)
- Web panel: All memory accessible to the display device

The default file name corresponds to the following scheme:

`SupportData_xxx_xxx_yyy_zzzzzzzzzzz.zip` with

- `xxx_xxx`: Machine type, e. g. XPA_934
- `yyy`: Printhead resolution, if the machine type is available with different resolutions (e.g. 300dpi), otherwise the field is omitted

- zzzzzzzzzzz: Serial number of the CPU board, if the board has a serial number, otherwise the field remains empty

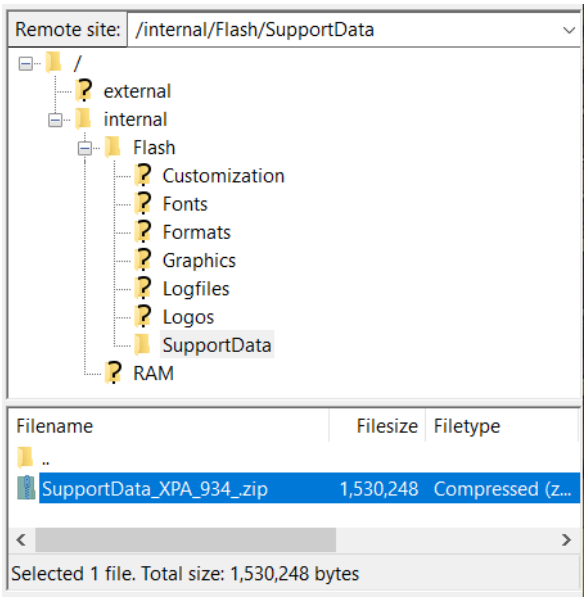


Fig. 58: Location of the support file (here stored in the internal flash memory).

Procedure

Saving via the operation panel:

1. (Optional) Plug in external storage medium.
2. Switch on the machine.
3. Call parameter Tools > Diagnostic > Gen.Support Data.
4. Select and confirm the storage medium.

   ‖ If no external storage medium is connected, only Internal Flash can be selected. ‖

   The support file is saved under the default file name (see above).

   ‖ If a file with the specified name already exists, it will be overwritten without prior request. ‖

(Alternatively) Saving via the web panel:

5. In the Web panel, call up the administration view.
6. Click on “Save support data”:
   The default file name is displayed:

7. (Optional) Change the file name.

8. Click “Ok” to save.
   The “Save file” dialog of the display device opens.
9. Select and confirm the storage location.

   ‖ Only a storage location that is accessible to the display device in use can be selected. ‖

Related reference

Administration view on page 33
Diagnostic dump on page 210

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.):

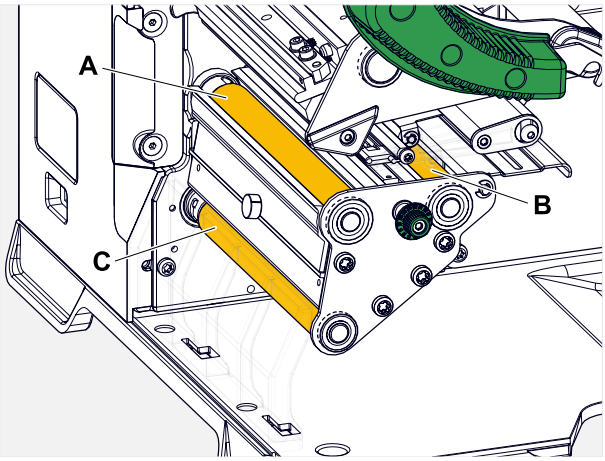
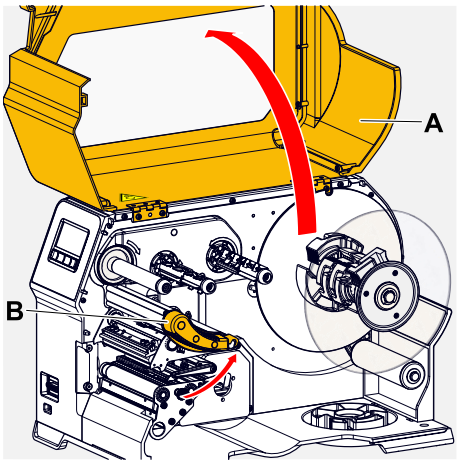


Fig. 59: Positions of the rubber rollers (some parts are faded out for better visibility of the rollers) **A** Print roller, **B** Feed roller, **C** Draw roller

Procedure

Removing a roller:

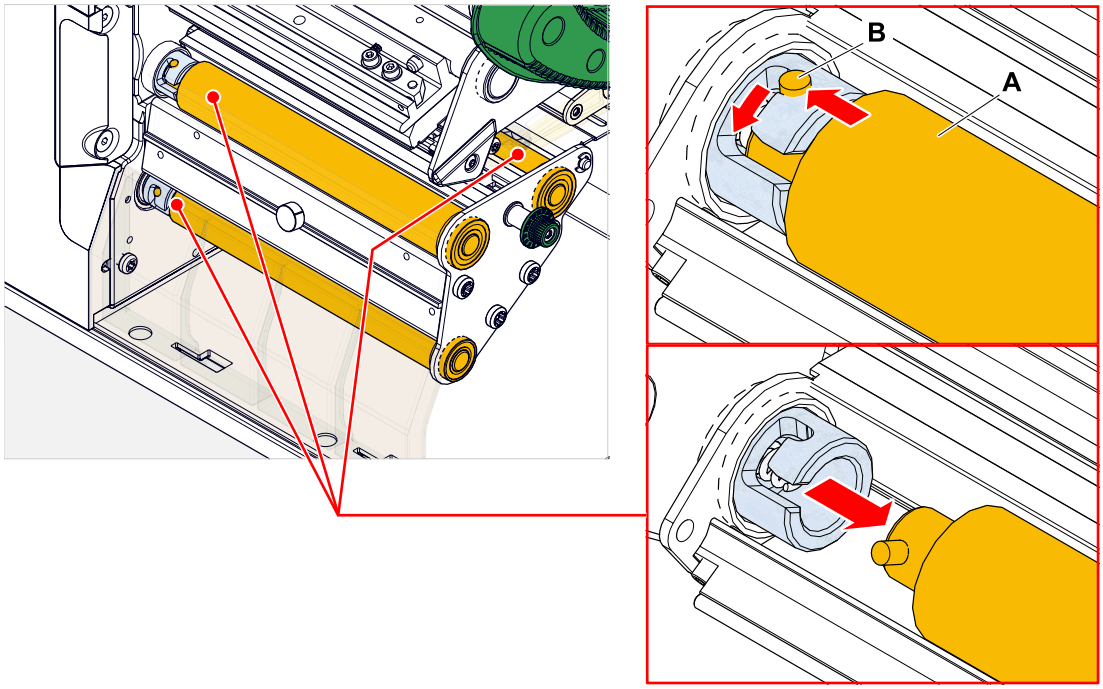
1. Switch off the machine.
2. Open the front hood (A).



3. Open the print head pressure lever (B, figure above) and the draw roller lever (C, figure above).
4. (Optional) Remove the label web from the print module.

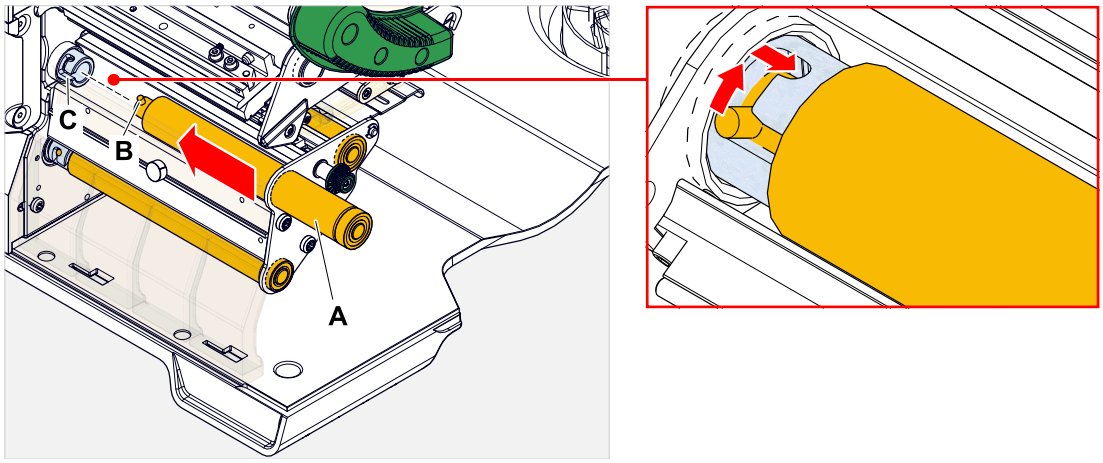
5. Press the print roller (A) firmly in up to the stop, then turn it to the left and pull it out.

> 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.



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 (C) 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

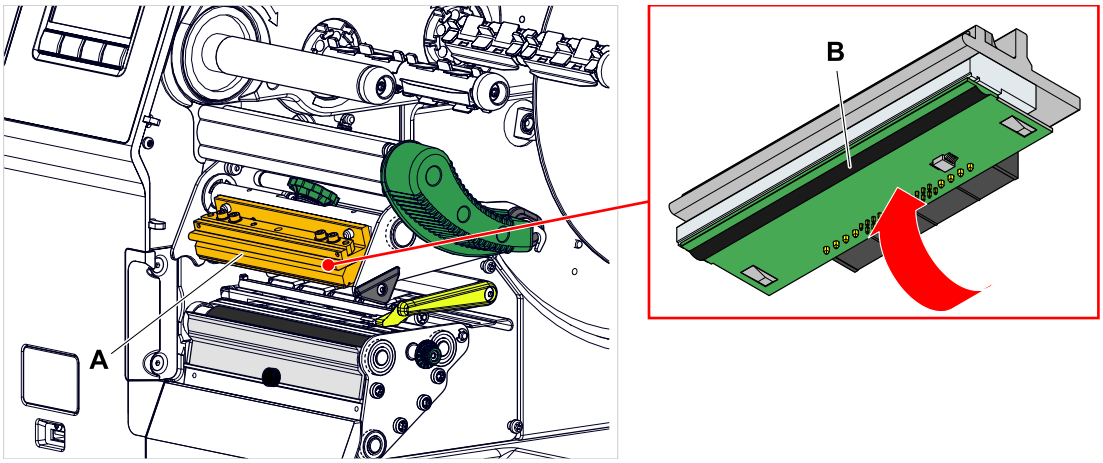


Fig. 60: **A**: Print head, **B**: Thermal strip at the print head

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.

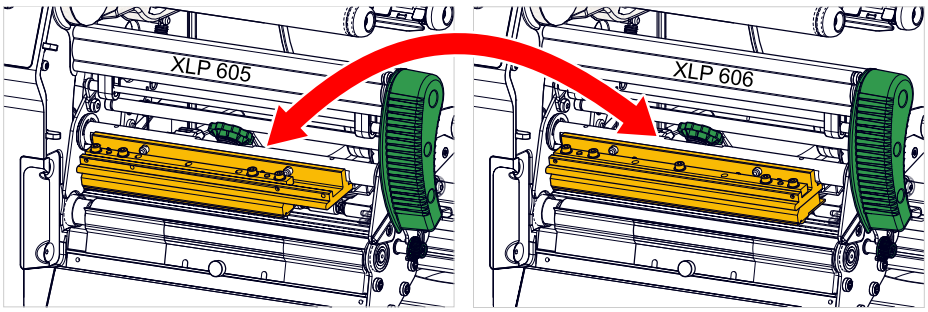
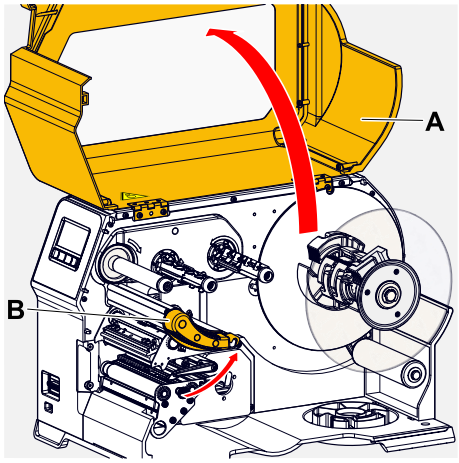


Fig. 61: The print heads of XLP 605 and XLP 606 can be interchanged. The built-in print head is automatically detected and the relevant settings are adjusted.

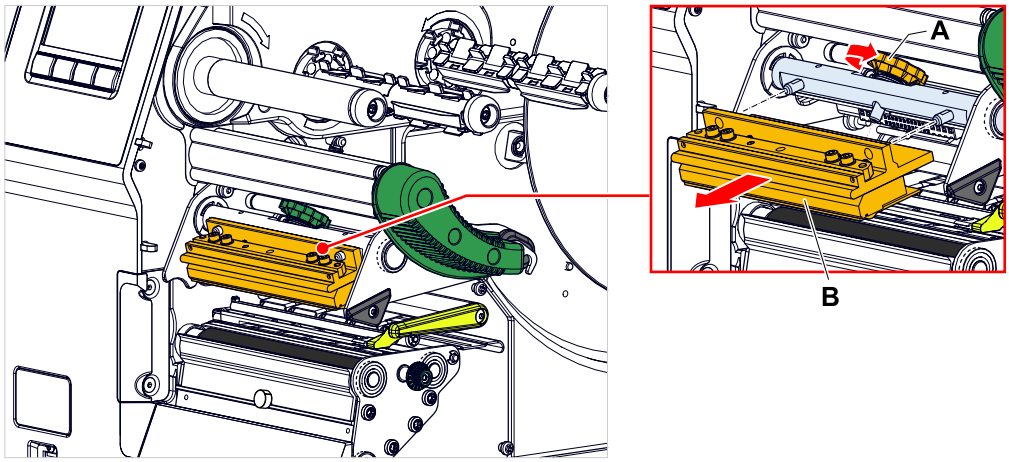
Procedure

Removing the print head:

1. Switch off the machine.
2. Open the front hood (A, figure below).

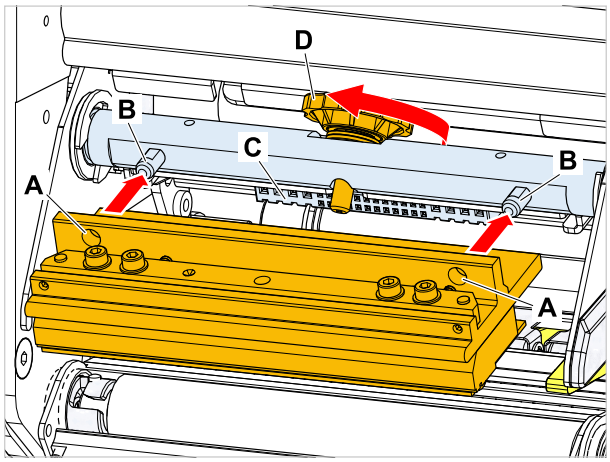


3. Open the print head pressure lever (B, figure above).
4. (Optional) Loosen the ribbon web and push it aside at the print head.
5. Loosen thumb screw (A) and pull print head (B) forward.



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:

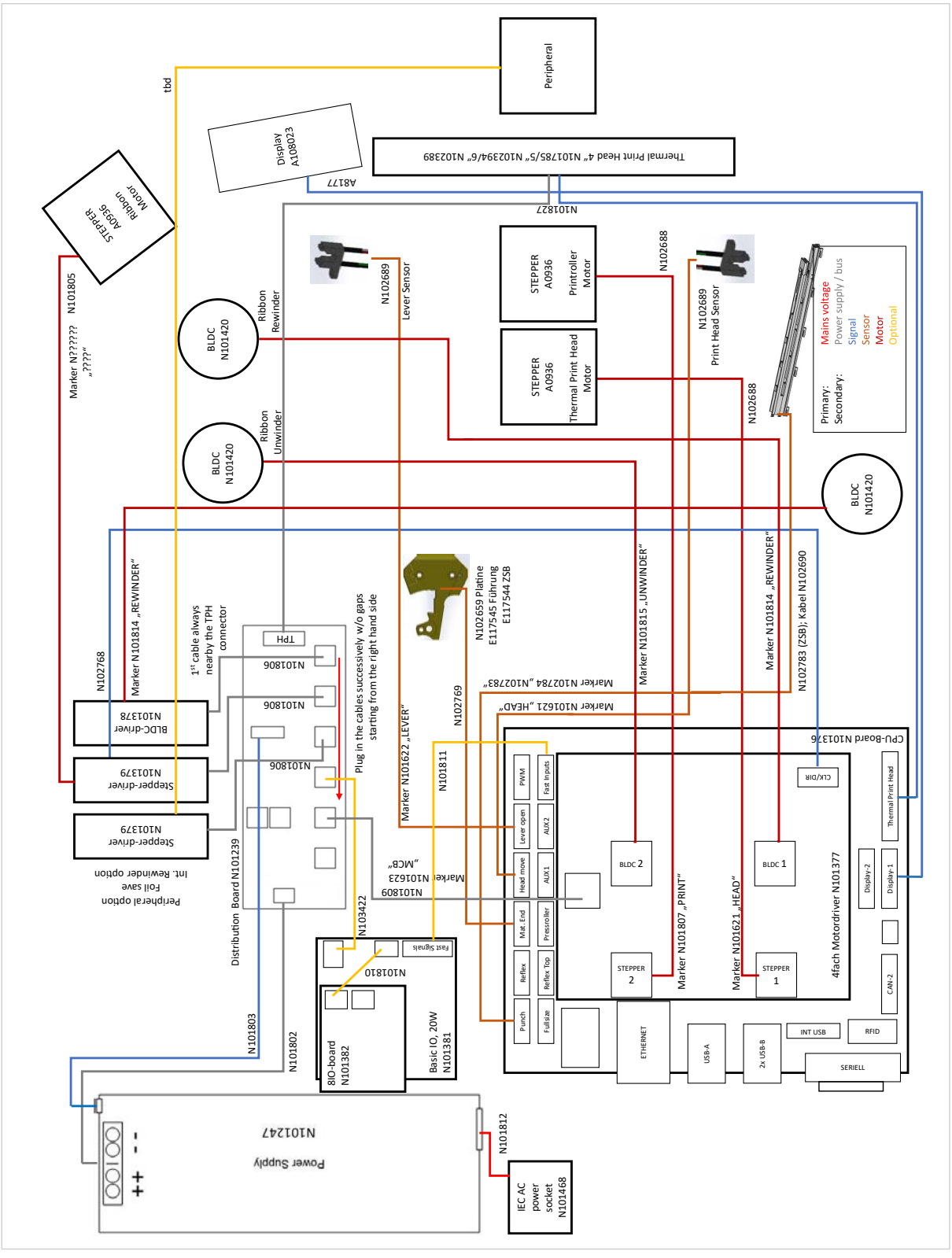
```
6033
Print Head not supp.
```

If no print head or a defective print head is installed, the following error message appears:

```
6034
P. Head missing or defect
```

Electronics Description

WIRING DIAGRAM



ELECTRONIC COMPONENTS

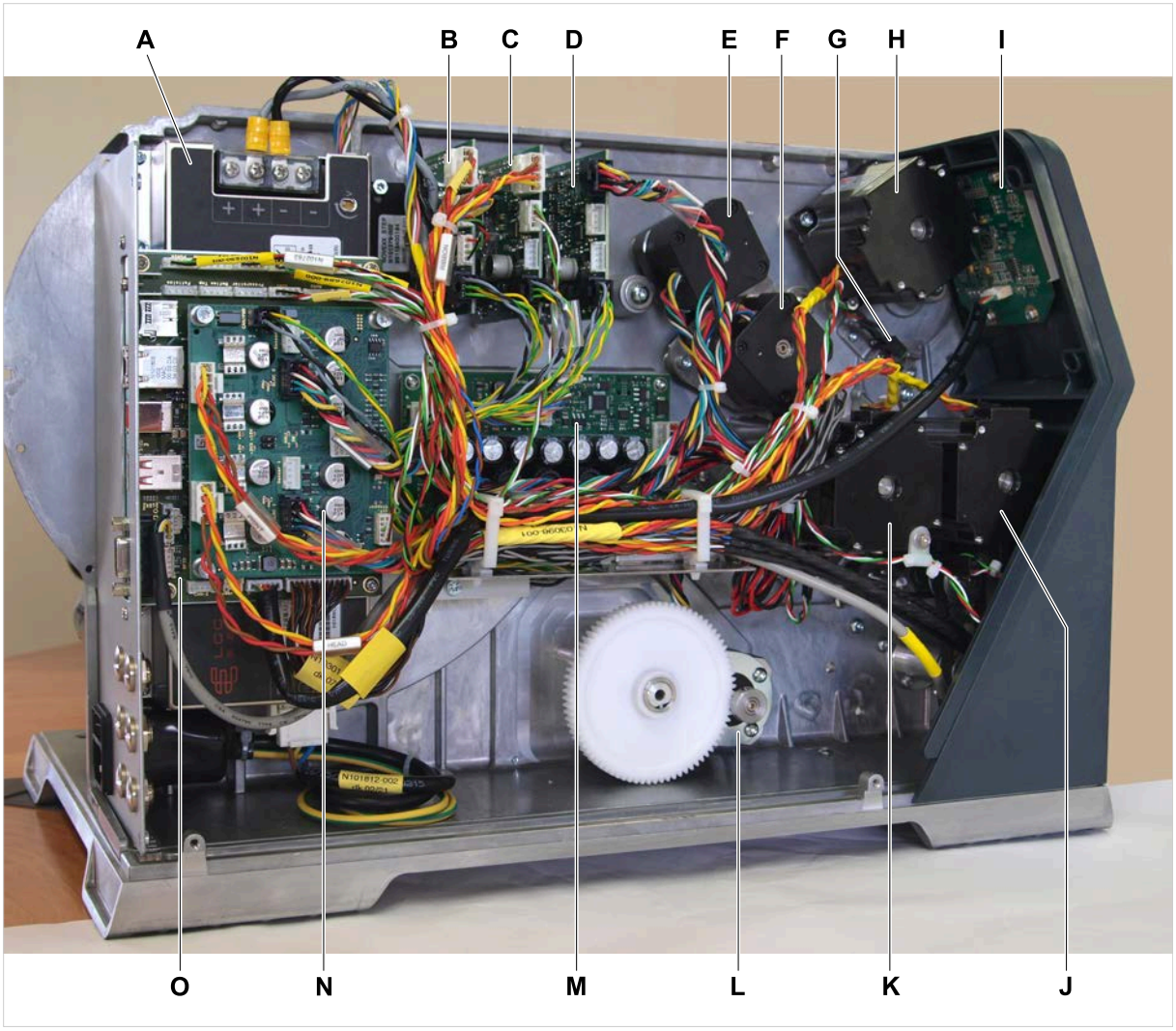


Fig. 62: Electronic components in an XLP 604 “Peripheral” with dispenser option and ribbon saving option.

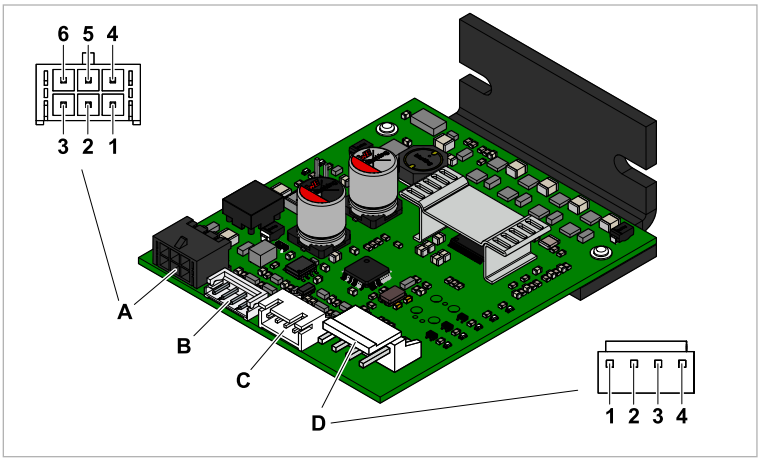
A	Power supply
B	Motor output stage board for stepper motor (here: for pheripheral device)
C	(Ribbon save option) Motor output stage board for ribbon roller motor (pos. H)
D	(Dispenser option) Motor output stage board for BLDC motor (rewinder motor, pos. L)
E	Ribbon unwind motor
F	Ribbon rewind motor
G	Sensor for print head pressure lever
H	(Ribbon save option) Ribbon roller motor
I	Operation panel board
J	Print roller motor
K	Print head lift mechanics motor

L	(Dispenser option) Backing paper rewinder motor
M	Distributor board
N	4-fold motor output stage board
O	CPU board (hidden under the 4-fold output stage board)

BOARDS

Output Stage Stepper Motor

Output stage for one stepper motor.
Article number: N101379



Connections

- **A**: Connection supply voltage and CAN bus

Pin	Designation	Description
1	GND	
2	CAN_LOW	CAN-bus low-line
3	CAN_LOW	
4	+VM	Supply voltage +24 V or +48 V
5	CAN_HIGH	CAN-bus high-line
6	CAN_HIGH	

- **B**: w/o function
- **C**: Encoder interface

  Connection motor output stage board (multiple)

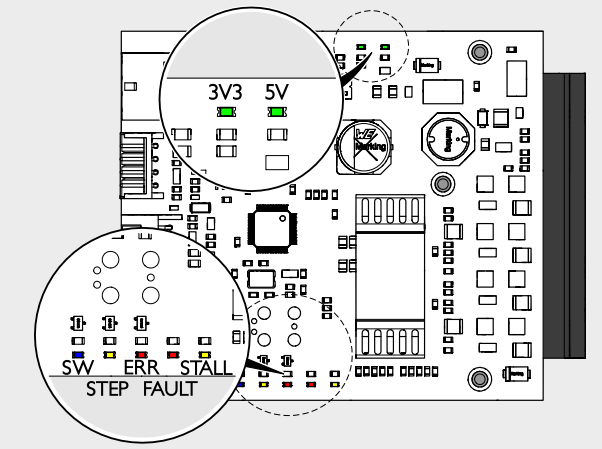
Pin	Designation
1	5 V
2	Enc A

Pin	Designation
3	GND
4	Enc B

- **D**: Connection motor

Pin	Designation
1	Motor A
2	Motor A\
3	Motor B
4	Motor B\

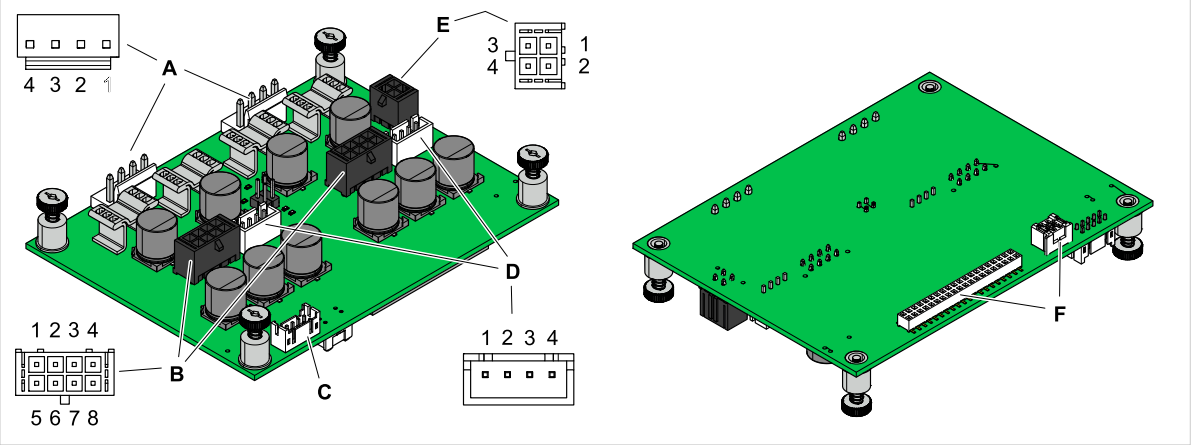
LEDs



LED	Color	Function
3V3	green	3.3 V supply voltage is available
5V		5 V supply voltage is available
SW	blue	Flashing • slow = application is active • fast = bootloader is active • very fast = selection mode; occurs, if more than one board of the same type has been installed; watch the operator panel for instructions
STEP	yellow	Switches on/off at each step of the motor
ERR	red	µC reports error (software-controlled error)
FAULT	red	Motor output stage reports error (hardware-controlled error)
STALL	yellow	Motor output stage reports error (hardware-controlled error)

Output stage board (multiple)

Output stage board for 2 stepper motors and 2 BLDC motors.
Article number: N101377



Connections

- **A**: Connection Stepper Motor

Pin	Designation
1	Motor A
2	Motor A\
3	Motor B
4	Motor B\

- **B**: Connection BLDC motor

Pin	Designation	Description
1	HALL_A	Hall sensor winding A
2	HALL_B	Hall sensor winding B
3	HALL_C	Hall sensor winding C
4	GND	
5	MOTOR_A	Winding A
6	MOTOR_B	Winding B
7	MOTOR_C	Winding C
8	HALL_5V	5 V supply voltage

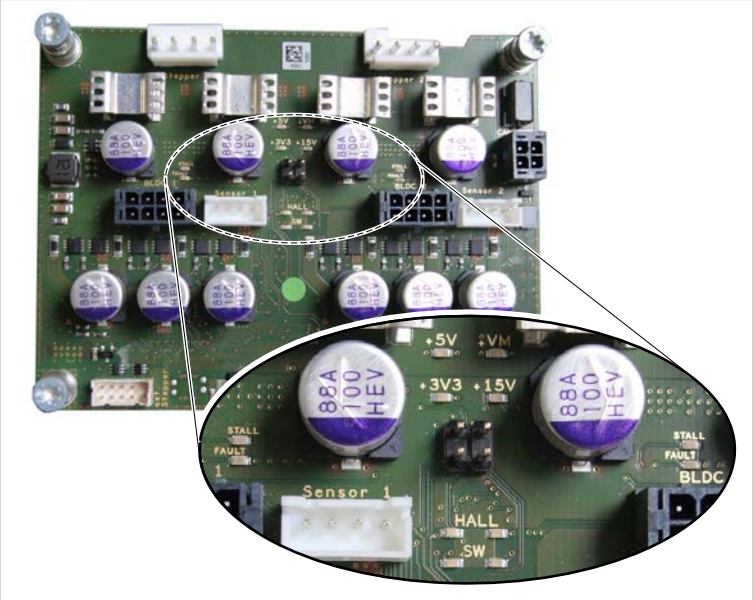
- **C**: Connection stepper output stage board (single)
- **D**: Encoder interface (not applied)
- **E**: Connection power supply and CAN bus

Pin	Designation	Description
1	GND	

Pin	Designation	Description
2	CANL	CAN bus low-line
3	CANH	CAN bus high line
4	+VM	Supply voltage +24 V (XPA 93x) or +48 V

- **F**: Connection CPU board (the boards are plugged together directly)

LEDs



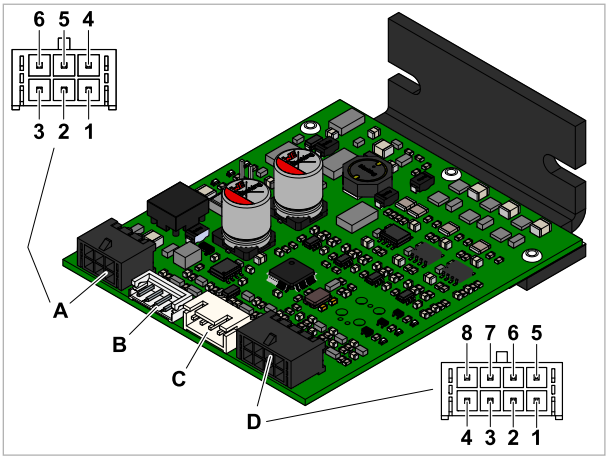
LED	Color	
+VM	green	+24 V supply voltage is available
FAULT	red	Motor output stage reports error (hardware-controlled error)
STALL	yellow	Motor output stage reports error (hardware-controlled error)
HALL		Switches on/off at every hall step (even when rotated manually)
SW	blue	Flashing • slow = application is active • fast = bootloader is active • very fast = selection mode; occurs, if more than one board of the same type has been installed; watch the operator panel for instructions

Related tasks

4-fold output stage board replacement on page 247

Output Stage BLDC Motor

Output stage for one BLDC motor.
Article number: N101378



Connections

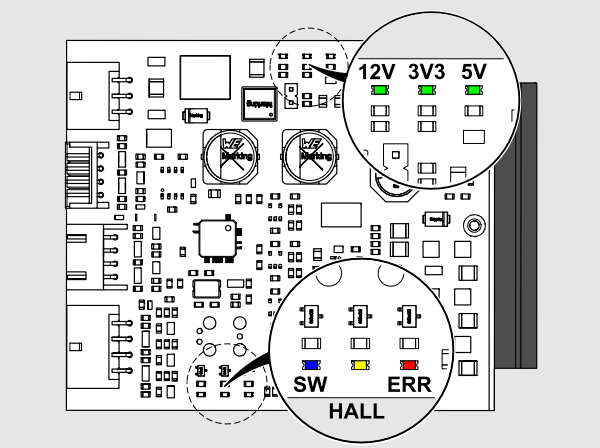
- (A) Connection supply voltage and CAN bus

Pin	Designation	Description
1	GND	
2	CAN_LOW	CAN-bus low-line
3	CAN_LOW	
4	+VM	Supply voltage +24 V or +48 V
5	CAN_HIGH	CAN-bus high-line
6	CAN_HIGH	

- (B) w/o function
- (C) w/o function
- (D) Connection motor

Pin	Designation	Description
1	HALL_A	Hall sensor winding A
2	HALL_B	Hall sensor winding B
3	HALL_C	Hall sensor winding C
4	GND	
5	MOTOR_A	Winding A
6	MOTOR_B	Winding B
7	MOTOR_C	Winding C
8	HALL_5V	5 V supply voltage

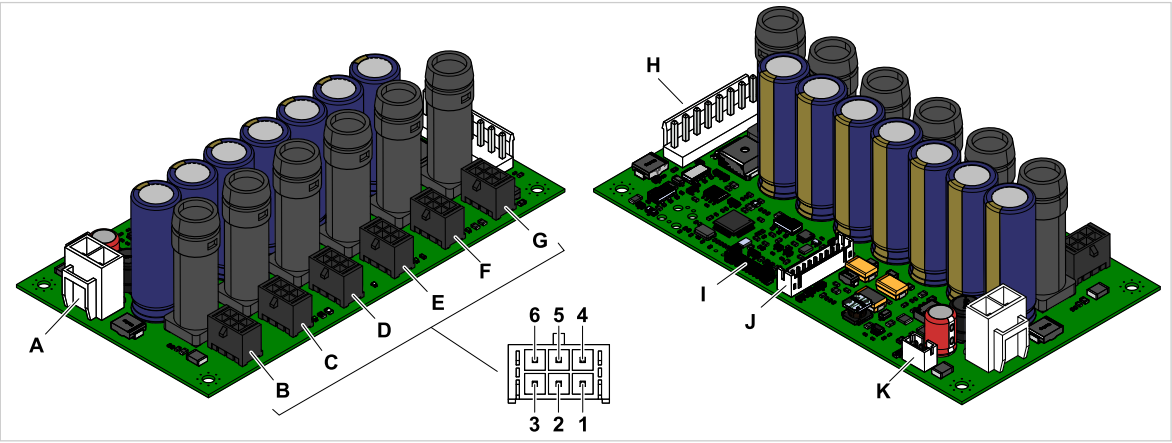
LEDs



LED	Color	Function
ERR	red	µC reports error (software-controlled error)
HALL	yellow	Switches on/off at every hall step (even when rotated manually)
SW	blue	Flashing (fast = bootloader is active; slow = application is active)
5V	green	5 V supply voltage is available
3V3		3.3 V supply voltage is available
12V		12 V supply voltage is available

Distributor Board

Distributes the energy supplied by the power supply unit in the system.
Article number: N101239



Connections

A	Power supply (supply voltage)
B-G	CAN bus

H	Print head
I	n. a.
J	Power supply (data)
K	Fan

Pin assignment CAN bus:

Pin	Designation	Description
1	GND	
2	CAN_LOW	CAN-bus low-line
3	CAN_LOW	
4	+VM	Supply voltage +24 V or +48 V
5	CAN_HIGH	CAN-bus high-line
6	CAN_HIGH	

Fuses

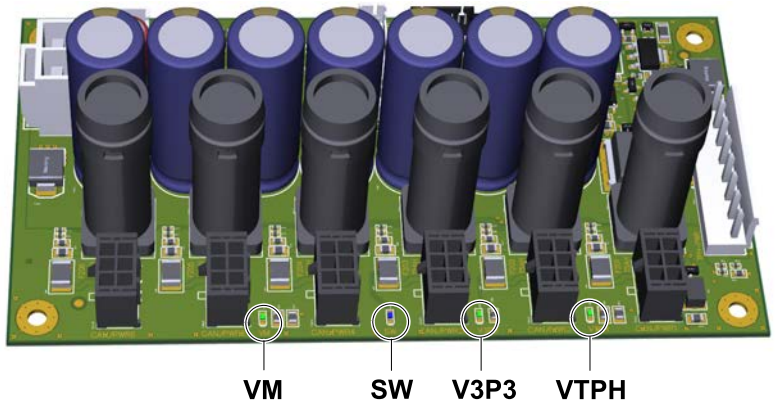
Type: T5AH

Rules for the assignment of CAN bus connections

- The CAN bus connections must be assigned from right to left (G-F-E-D-C-B, see figure above)
- The *last* [48] CAN bus connection must be connected to the *multiple output stage*
- *In between* (between the first and the last connection) the output stage for the BLDC motor and the BasicIO board and possibly further boards are connected.

‖ None of the intermediate connections must remain unassigned.. ‖

LEDs

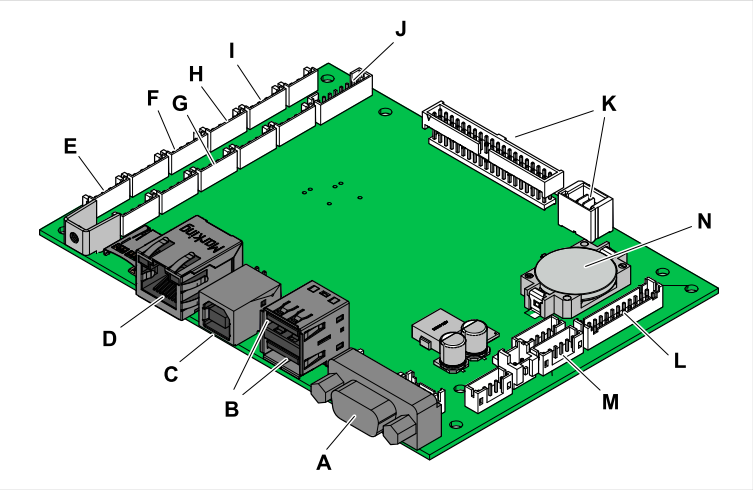


48 That means the left most connection in the row of assigned CAN bus connections.

LED	Color	Function
VM	Green	24 V supply voltage from the power supply is available
SW	Blue	Flashing • slow = application is active • fast = bootloader is active • very fast = selection mode; occurs, if more than one board of the same type has been installed; watch the operator panel for instructions
V3P3	Green	3,3 V supply voltage is available
VTPH		Print head supply voltage is available

CPU Board

Article number: N101376



Connections

- **A**: Serial interface RS232 (D-Sub 9)
- **B**: USB interface type B (device, USB 2.0)
- **C**: USB interface type A (host, USB 2.0)
- **D**: Ethernet interface (10/100/1000)
- **E**: Connection label sensor (punches)
- **F**: Connection material end sensor
- **G**: Connection pressure roll sensor
- **H**: Connection print head sensor
- **I**: Connection locking sensor
- **J**: Connection BasicIO board
- **K**: Connection multiple output stage board (the boards are plugged together directly)
- **L**: Connection print head
- **M**: Connection operation panel

- **N**: Battery

Lithium battery

The CPU board is equipped with a real-time clock that maintains its setting when the machine is switched off. This is ensured by a lithium battery on the board.

Battery type: Panasonic CR2032 or equivalent battery type

> The battery is *not* rechargable!
>
> The battery must be UL listed!

Nominal voltage	3 V
Nominal capacity	220 mAh
Continuous standard load	0.2 A
Operating temperature	-30 to +60°C
Max. abnormal charging current	5.0 mA

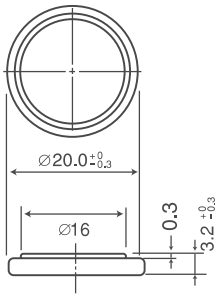


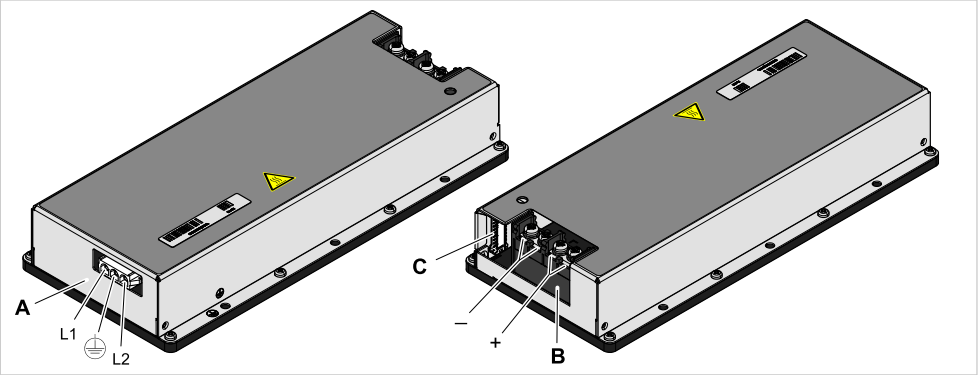
Table 26: Battery type CR2032 - Specifications and dimensions.

Related tasks

Battery replacement on page 250
CPU board replacement on page 249

POWER SUPPLY

Article number: N101247



Technical Data

- Input (AC):
  - Input voltage: 100-240 V (AC)
  - Input current: max. 8 A
  - Input frequency: 50/60 Hz
- Output (DC):
  - Output voltage: 28 V (DC)
  - Output current: 25 A (DC)
  - Output power: max. 600 W

Connections

- (A) *Power supply input*: Connect to mains inlet at the device
- (B) *Power supply output*: Connection to TPH board
- (C) Connect to TPH board (control signals)

Related tasks

Power supply replacement on page 251

Parts replacement

HOUSING PARTS

Overview of housing parts

Overview

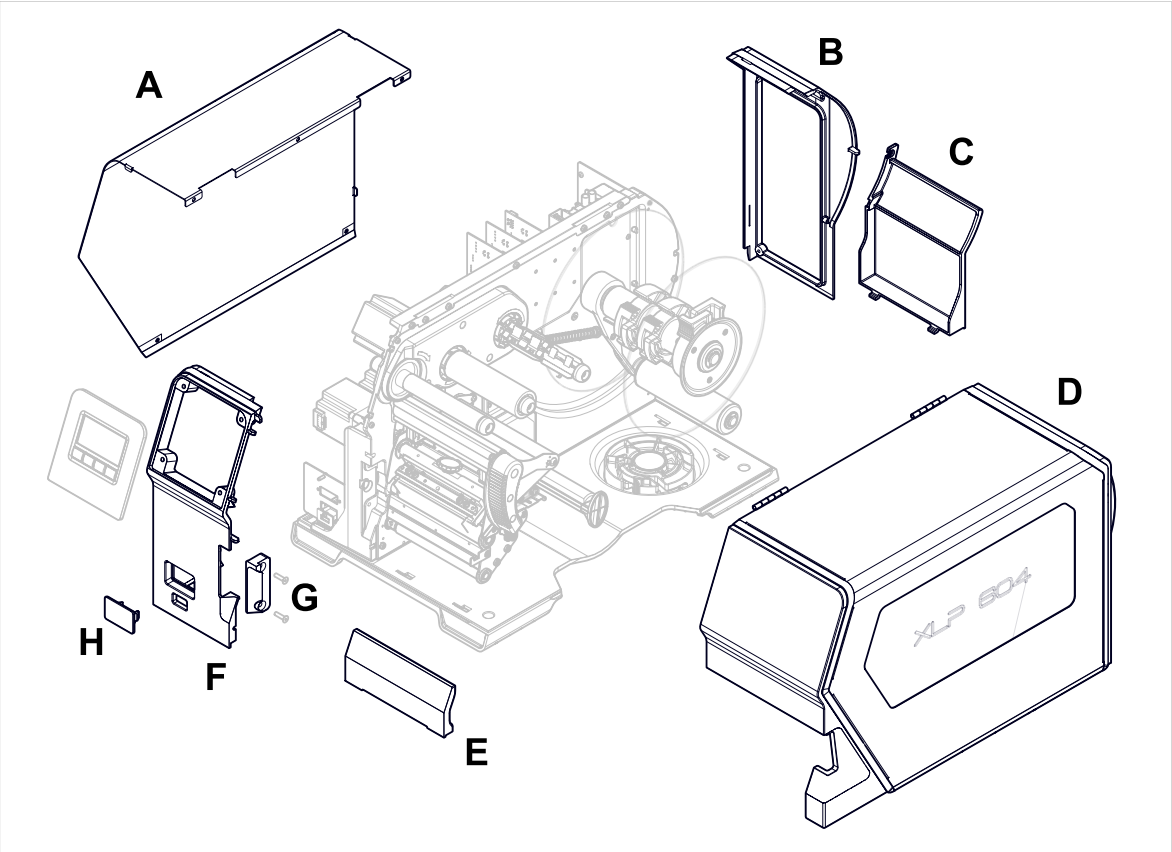


Fig. 63: Housing parts of the XLP 60x.

A	Rear hood
B	Interfaces frame
C	Rear bottom housing
D	Front hood
E	Front bottom housing
F	Front left housing
G	Flange cover
H	Plug cover

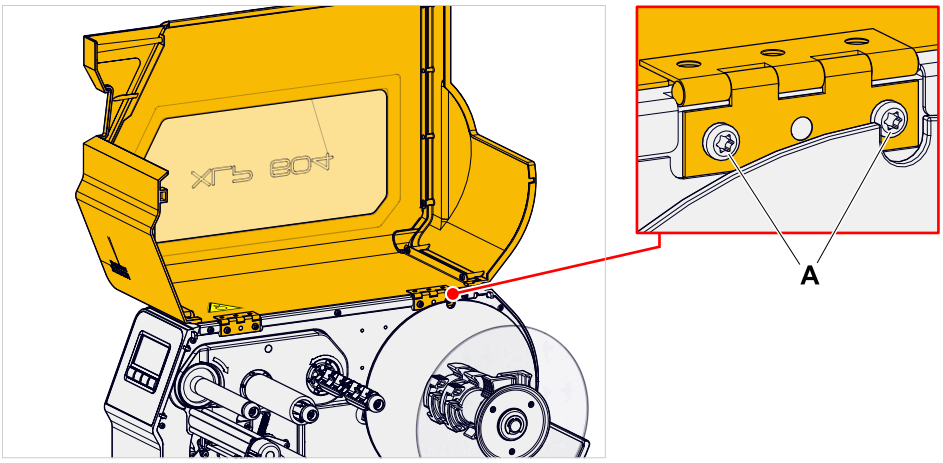
Front hood replacement

Before you begin

Tool: Torx screwdriver Tx20

Procedure

1. Unscrew 2 screws (A) from each of the 2 hinges. Hold the front hood while doing so.



2. Remove the front hood.
3. Perform the installation in the reverse order to the removal.

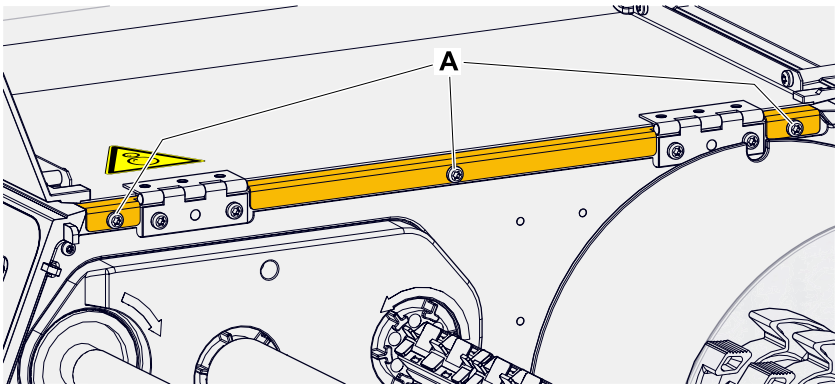
Rear hood replacement

Before you begin

Tool: Torx screwdriver Tx20

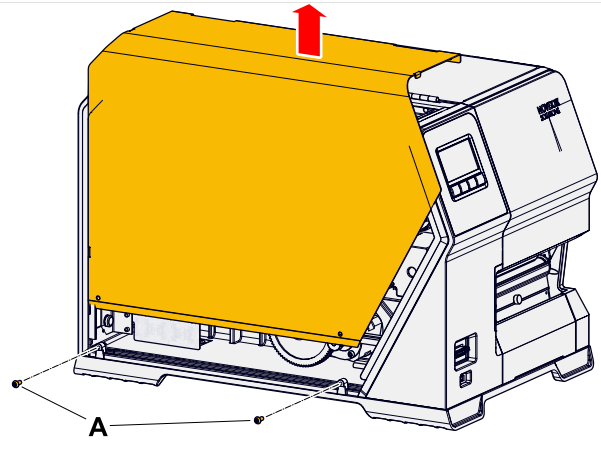
Procedure

1. Open the front hood.
2. Remove the 3 screws (A) on the inside:



3. Close the front hood.

4. Remove the 2 screws (A) on the outside:



5. Remove the rear hood (picture above).
6. Perform the installation in the reverse order to the removal.

Front left housing replacement

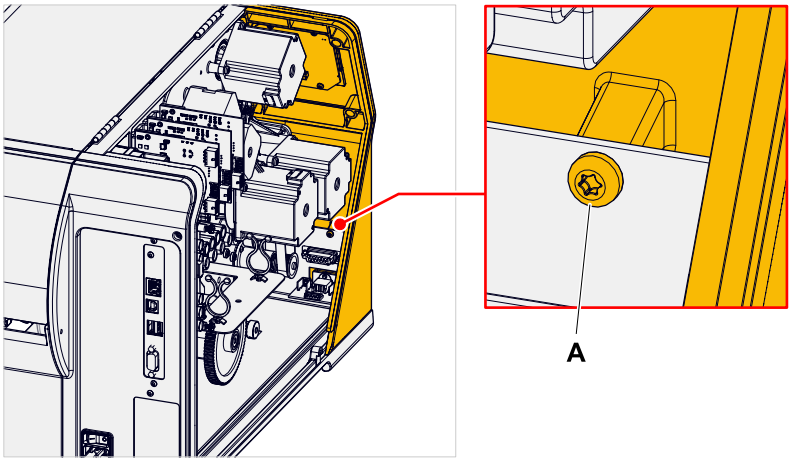
Before you begin

Tools:

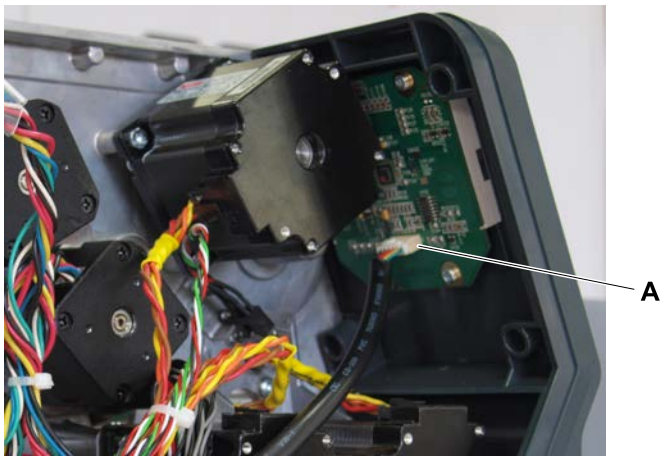
- Torx screwdriver Tx10, Tx20
- Spanner SW 7

Procedure

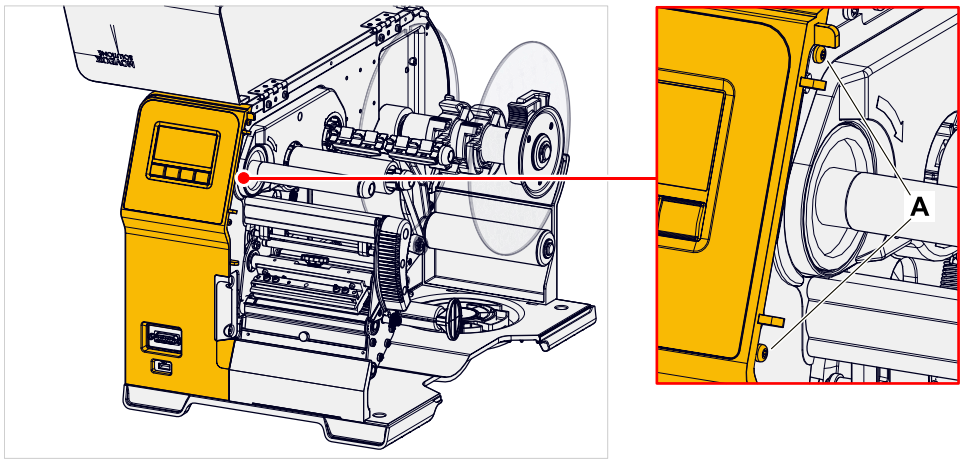
1. (Optional) Remove the peripheral device.
2. Remove the rear hood.
3. Remove the screw (A):



4. Unplug the connector (A) from the control panel board.



5. Open the front hood.
6. Remove 2 screws (A):



7. Carefully remove the housing part.
8. Perform the installation in the reverse order to the removal.

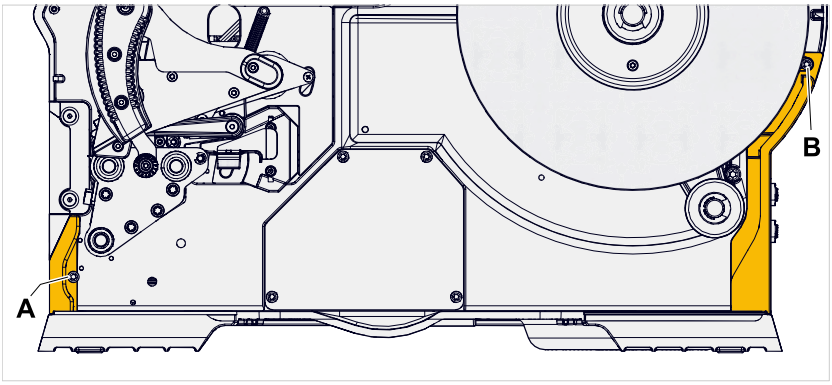
Bottom housing sections front/rear side replacement

Before you begin

Tool: Torx screwdriver Tx20

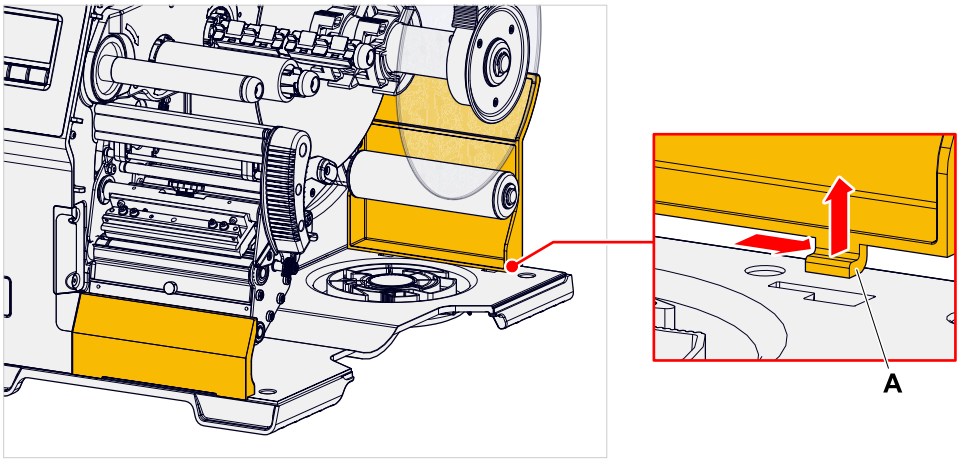
Procedure

1. Remove screw (A) respectively (B) at the relevant housing section.



2. Lightly pull the housing section outwards and carefully lift it upwards (picture below).

> The two plastic catches (A) per housing section reach into the openings on the printer base-plate! Do not break off the catches!



3. Perform the installation in the reverse order to the removal.

RIBBON MANDRELS

Ribbon core adapters replacement

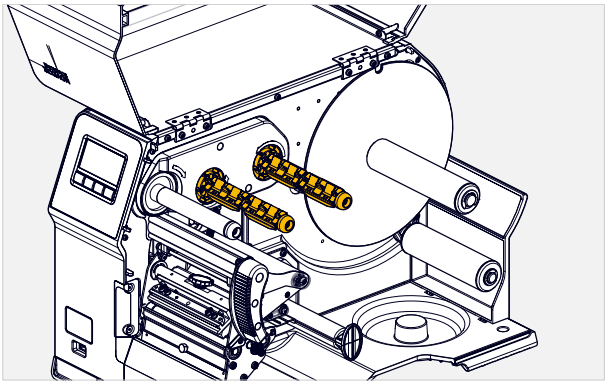


Fig. 64: Ribbon mandrels with 2 ribbon core adapter each at an XLP 604.

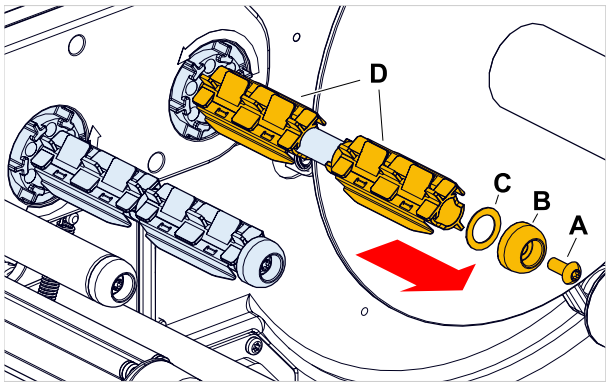
Before you begin

Tool: Torx screwdriver Tx25

Procedure

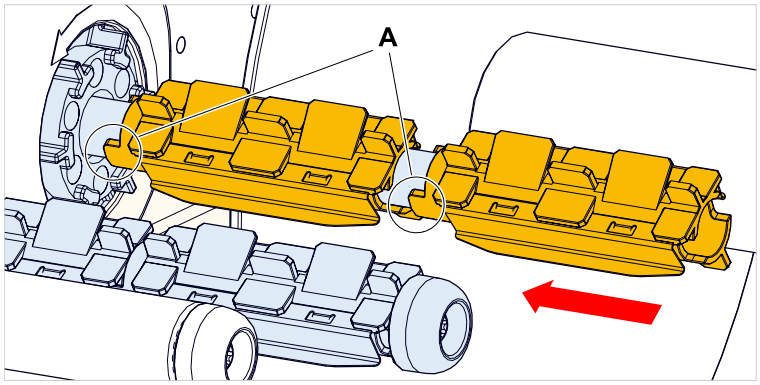
Disassembly:

1. Unscrew screw (A). Remove cap (B), washer (C) and ribbon core adapters (D).



Assembly:

2. Put the ribbon core adapters onto the axle with the driver lugs (A) facing backwards.



3. Rotate the core adaptes on the axle until the driver lugs engage.
4. Replace the washer and cap and screw them back on.

Ribbon mandrels replacement

Before you begin

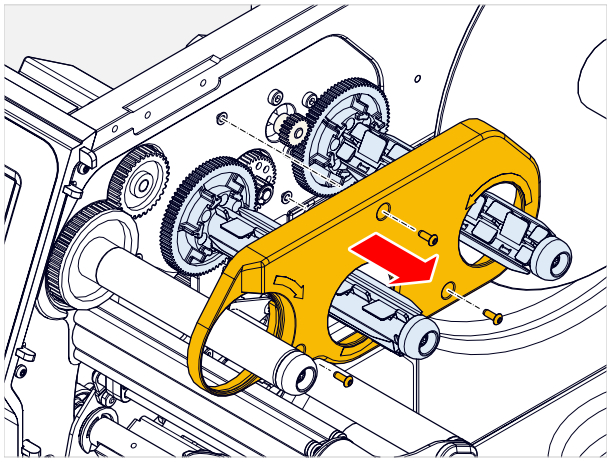
Tools:

- Torx screwdriver Tx10, Tx25

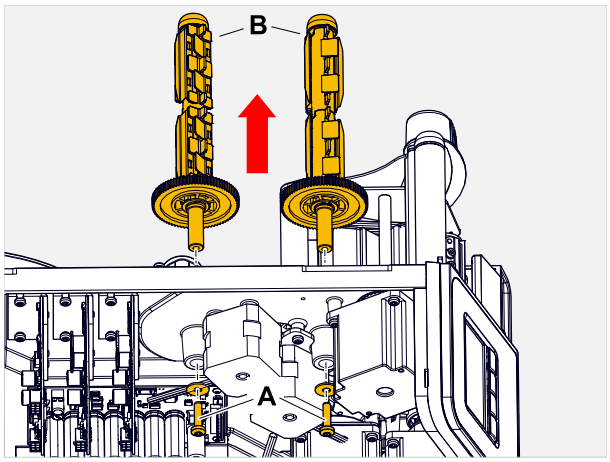
Procedure

Removal

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear hood.
3. Remove the ribbon mandrel cover (3 screws):



4. Loosen the retaining screws (A) at the end of the ribbon mandrel axles.



5. Pull the ribbon mandrels (B) out of the bearing.

Installation

6. Perform the installation in the reverse order to the removal.

Related tasks

Rear hood replacement on page 233

Ribbon unwinder motor replacement

Before you begin

Tools:

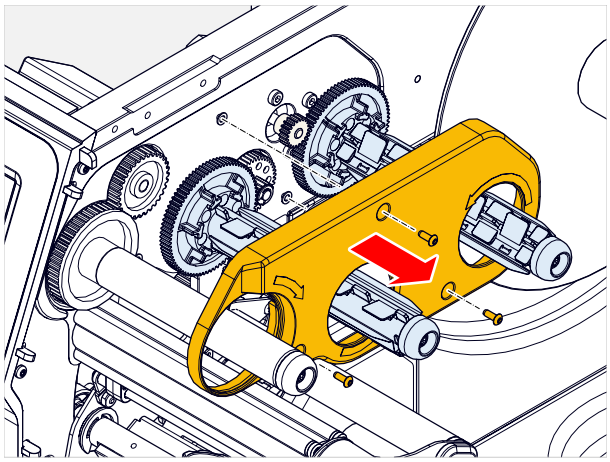
- Hex socket screwdriver 3 mm
- Torx screwdriver Tx10, Tx25

Procedure

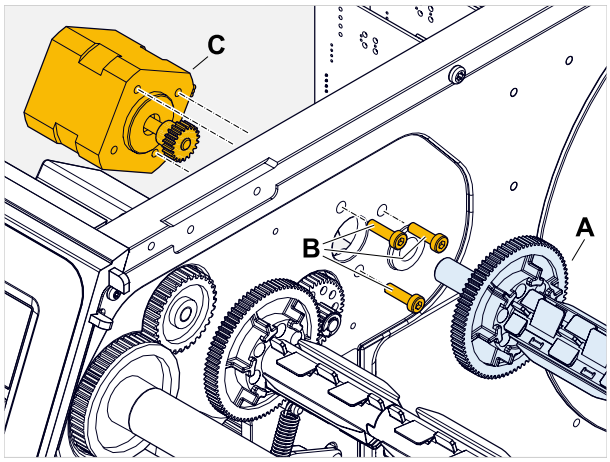
Removing:

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear hood.

3. Remove the ribbon mandrel cover (3 screws):



4. Remove the ribbon unwind mandrel (A).



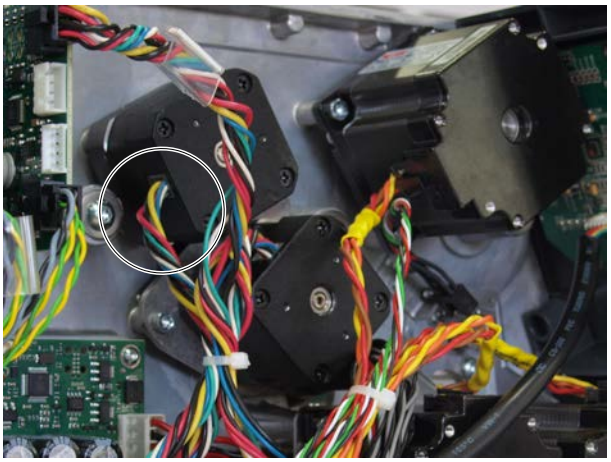
5. Remove 3 screws (B, picture above) and remove the motor (C).

Installing:

6. Perform the installation in the reverse order to the removal.

Observe the following:

The cable outlet of the motor points downwards to the left:



Connecting: See wiring diagram.

Related tasks

Rear hood replacement on page 233
Ribbon mandrels replacement on page 238

Related reference

Wiring Diagram on page 220

PRINT MODULE

Print head replacement

See chapter Print head replacement on page 217.

Label sensor replacement

Before you begin

Tool:

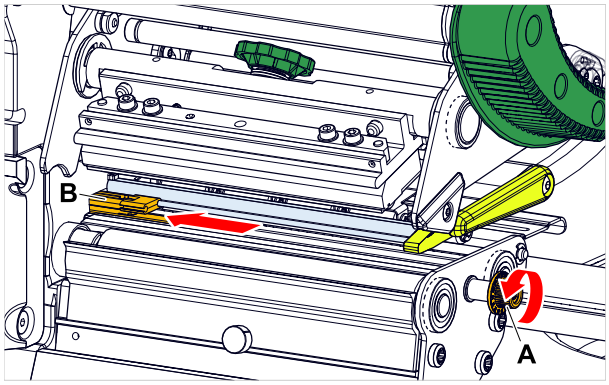
- Torx screwdriver Tx10

Procedure

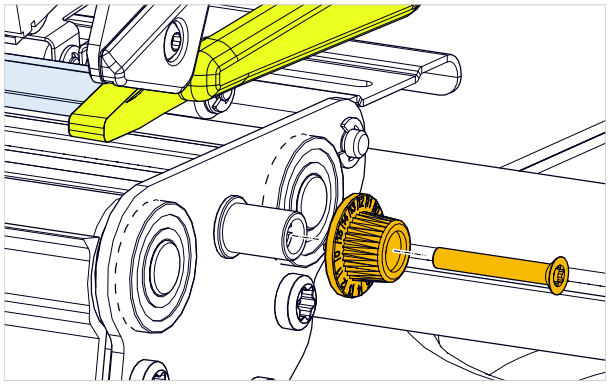
Removing:

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear hood.
3. Remove the front left housing.

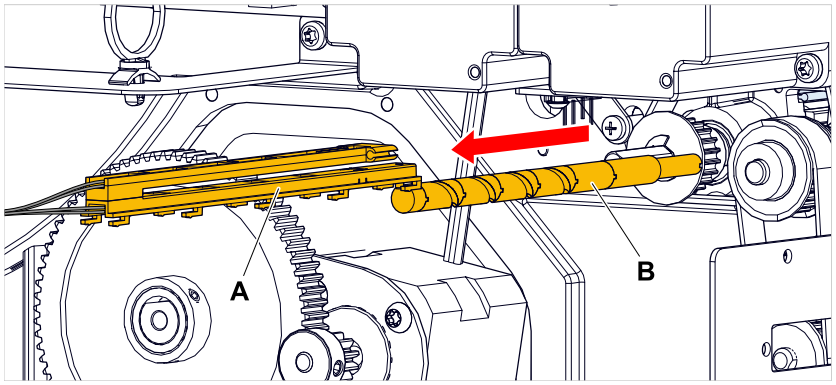
4. Open the print head pressure lever.
5. Push the sensor fork (B) all the way in with the rotary knob (A).



6. Unscrew the rotary knob:



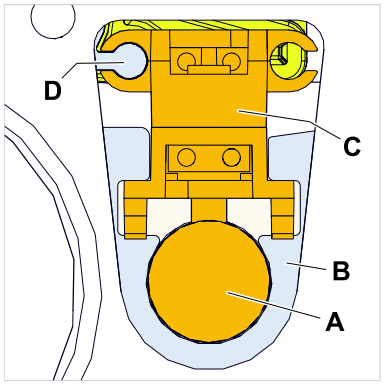
7. Pull out the sensor fork (A) and the spindle (B) on the opposite side.



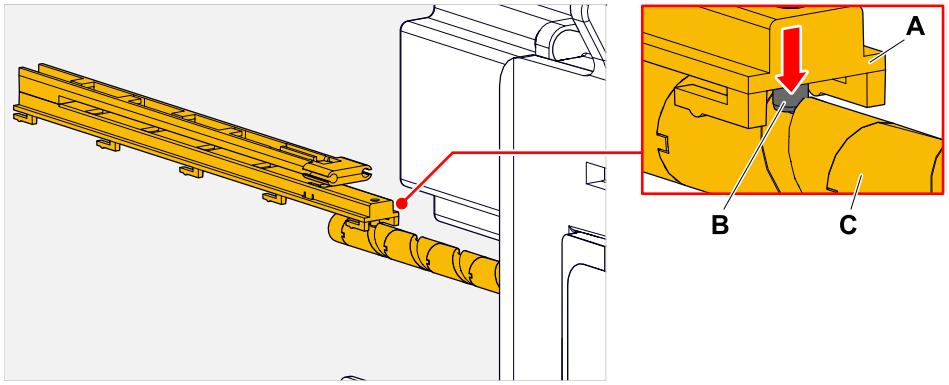
8. Unhook the sensor fork from the spindle.
9. Disconnect the sensor fork cable from the CPU board.

Installing:

10. Insert the spindle (A) about 2/3 into the guide profile (B).

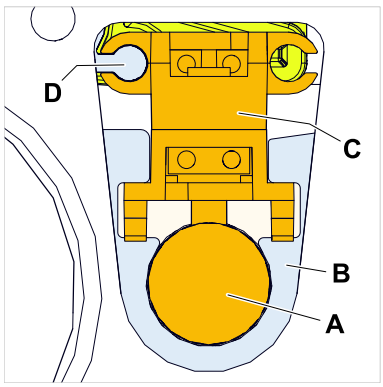


11. Hook the sensor fork (A) with the bolt (B) into the groove of the spindle (C) and hold it like this.

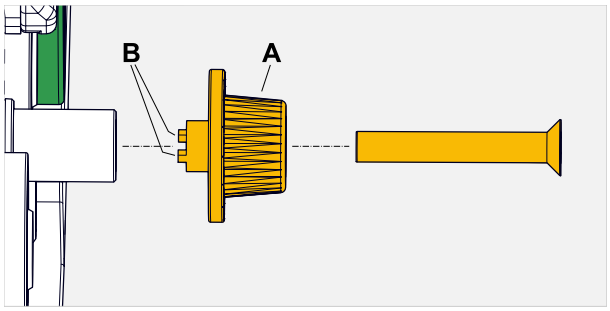


12. Carefully push the sensor fork (C) and spindle (A) together into the guide profile until the spindle hits the end.

‖ The upper part of the sensor fork must be guided by the nose (D). ‖



13. Replace the knob (A) and turn until the lugs (B) engage on the spindle. Screw the knob tight.



14. Check whether the sensor fork can be moved smoothly by turning the knob. If not, check the guiding.
15. Connect the sensor to the CPU board.
16. Reassemble the housing parts.

Related tasks

Rear hood replacement on page 233
Front left housing replacement on page 234

Related reference

Wiring Diagram on page 220

Print head lift mechanism replacement

Before you begin

Tools:

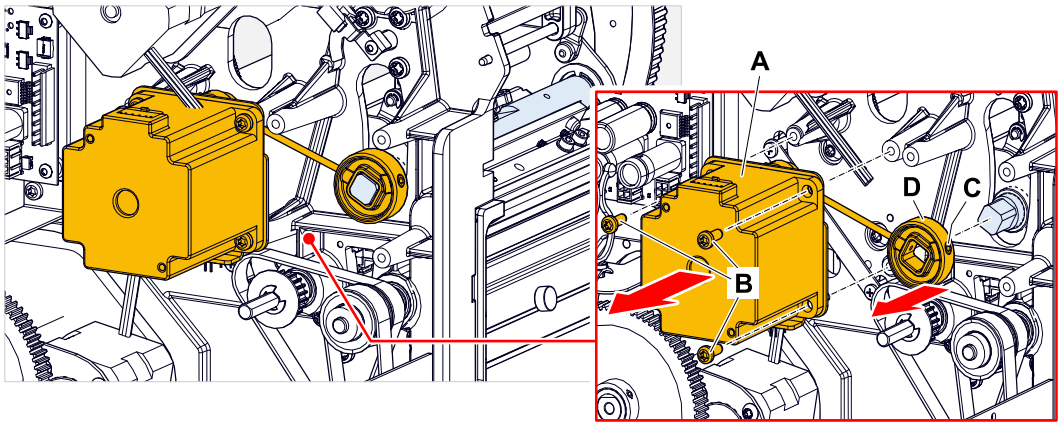
- Torx screwdriver Tx20
- Hex socket screwdriver 3 mm

Procedure

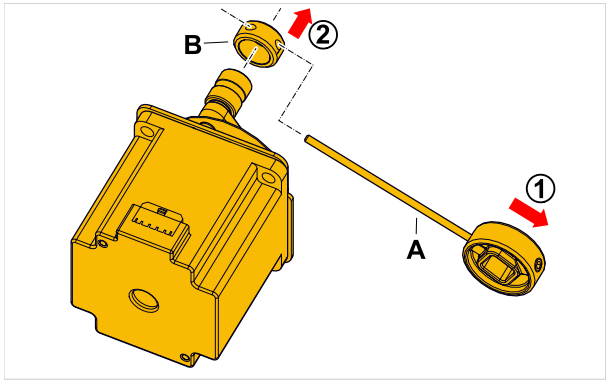
Removing:

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear hood.
3. Remove the front left housing.
4. Remove the feed motor.
5. Disconnect the cable from the head lift motor.

6. Loosen the set screw (C) at the head lift ring (D).



7. Unscrew the motor (A, picture above) and remove it together with the head lift ring.
8. Pull the head lift ring (A) out of the plastic ring (B), remove the plastic ring from the motor.

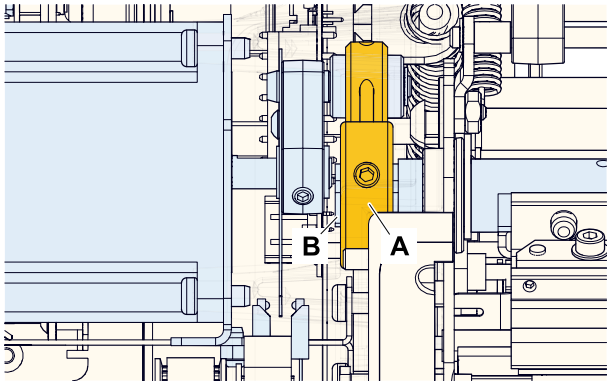


Installing:

9. Perform the installation in the reverse order to the removal.

Oberserve the following:

- Turn the plastic ring on the motor so that the holes for the steel wire of the head lift ring are at the top (B, picture above).
- Screw on the motor with the cable outlet facing upwards
- Before screwing on, align the head lift ring (A) so that it is centred on the shoulder (B) of the square axle.



Related tasks

Rear hood replacement on page 233
Front left housing replacement on page 234
Feed motor and T-belt replacement on page 246

Related reference

Wiring Diagram on page 220

MATERIAL TRANSPORT

Rubber rollers replacement

See chapter Replacing Rubber Rollers on page 215.

Feed motor and T-belt replacement

Before you begin

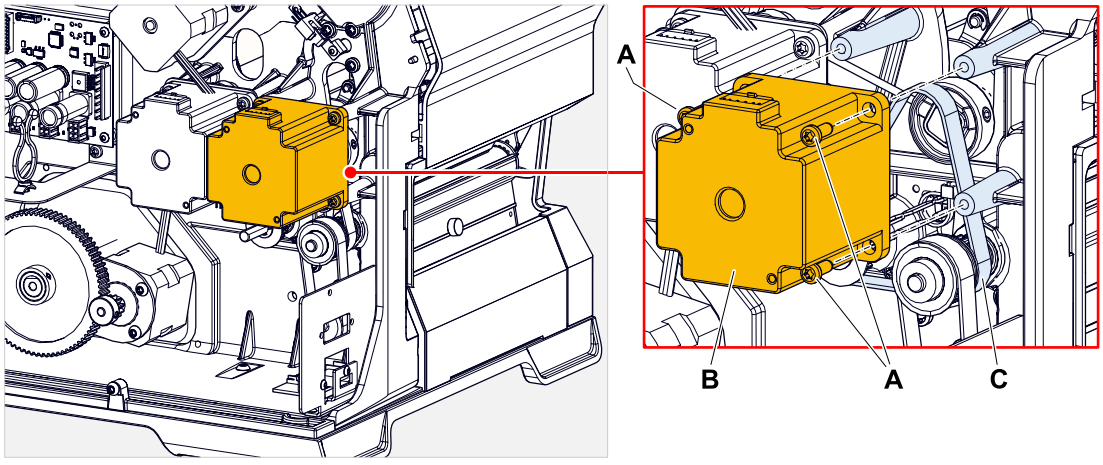
Tool:

- Torx screwdriver Tx20

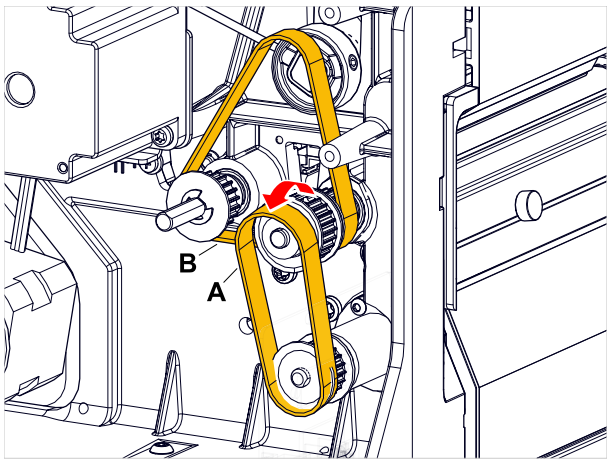
Procedure

Removing:

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear hood.
3. Remove the front left housing.
4. Disconnect the cable from the motor.
5. Loosen the 3 retaining screws (A) of the motor, remove the t-belt (C) from the motor and remove the motor (B)..



6. (Optional) (Only with dispenser option fitted) Lift lower toothed belt (A) over the edge of the upper t-belt pulley and remove it.



7. Remove the upper t-belt (B).

Installing:

8. Perform the installation in the reverse order to the removal.

> Observe the following:
>
> While tightening the screws, push the motor upwards to tension the t-belt.

Related tasks

Rear hood replacement on page 233
Front left housing replacement on page 234

ELECTRONIC COMPONENTS

4-fold output stage board replacement

Before you begin

Tool:

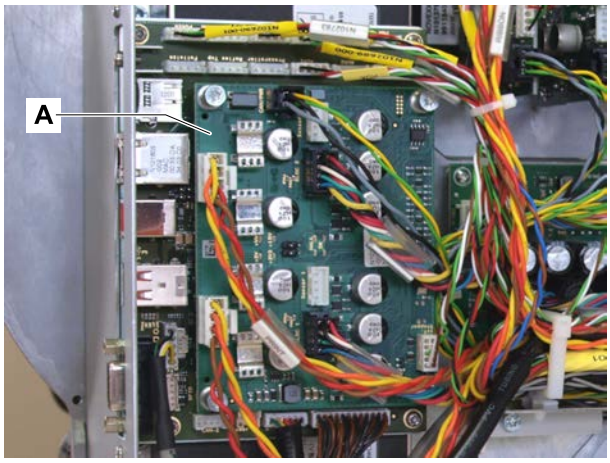
- Torx screwdriver Tx15

Procedure

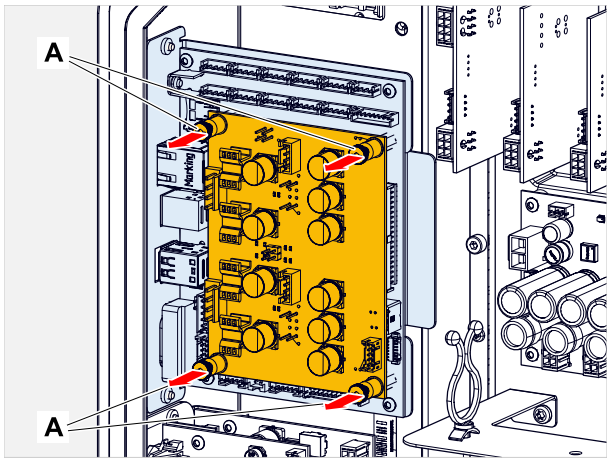
Removing

1. Switch off the printer. Disconnect the power cable.
2. Remove the rear hood.

3. Disconnect all cables from the motor driver board (A):



4. Loosen the 4 screws (A) in the corners of the motor driver board.



5. Carefully unplug and remove the motor driver board.

> CAUTION! - Lift the motor driver board *straight* off the CPU board until the connectors between the boards have come loose.

Installation

6. Perform the installation in the reverse order to the removal.

> Observe the following:
>
> Reconnect all cables according to the wiring diagram.

Related tasks

Rear hood replacement on page 233

Related reference

Wiring Diagram on page 220
Output stage board (multiple) on page 224

CPU board replacement

The CPU board is located under the 4-fold motor output stage board. The two boards are connected by 2 connectors on the boards.

Before you begin

Tools:

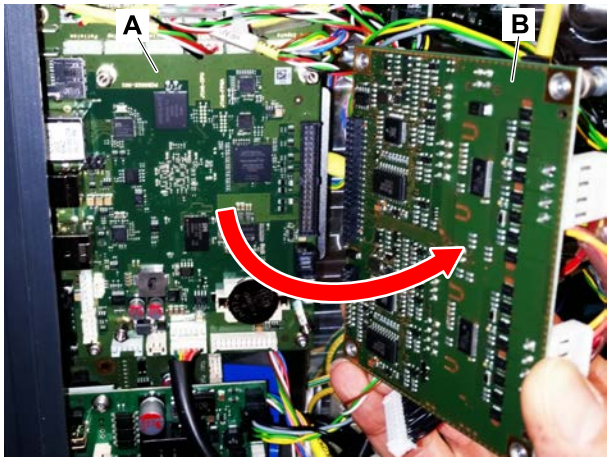
- Torx screwdriver Tx10, Tx15

Procedure

Removal

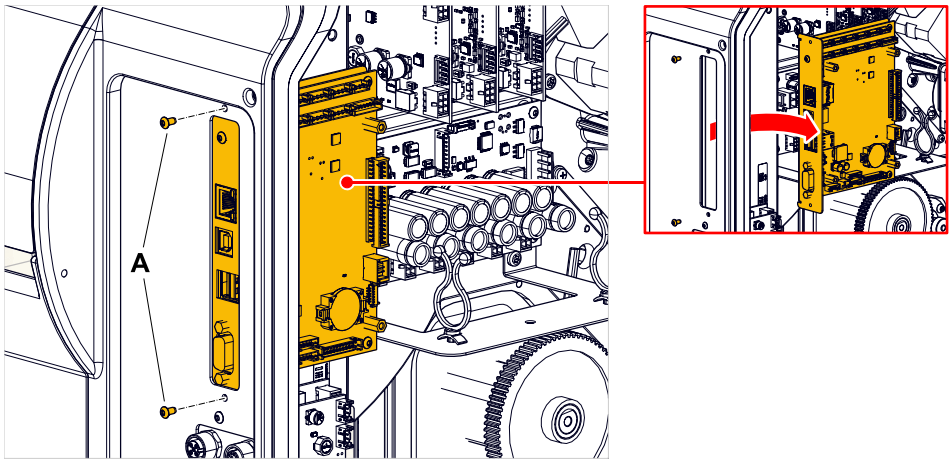
1. Switch off the printer. Disconnect the power cable.
2. Remove the rear hood.
3. Loosen the 4-fold motor driver board (B) and swing it to the side.

> The cables can remain plugged in.
>
> CAUTION! - First lift the motor driver board *straight* off the CPU board (A) until the connectors between the boards have come loose, then swing it to the side.



4. Disconnect all cables from the CPU board (A, picture above).

5. Remove the 2 screws (A) and take out the CPU board:



Installing

6. Perform the installation in the reverse order to the removal.

> Observe the following:
>
> Reconnect the cables according to the wiring diagram.

Related tasks

Battery replacement on page 250
Rear hood replacement on page 233
4-fold output stage board replacement on page 247

Related reference

Wiring Diagram on page 220
CPU Board on page 229

Battery replacement

The battery for buffering the real-time clock is located on the CPU board. The board must be removed to replace the battery.

Before you begin

Tool: Small screwdriver

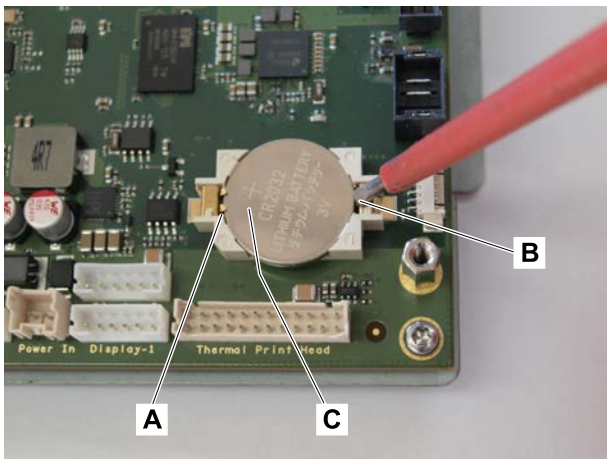
WARNING!
Risk of explosion if the battery is incorrectly polarised or if an attempt is made to recharge the battery!

- ► Replace used battery only with the same or an equivalent battery type.
- ► Insert battery only with correct polarity.
- ► Dispose of used battery according to the battery manufacturer's recommendation.

Procedure

1. Remove the CPU-board.

2. Lever battery (C) out of the holder with the screwdriver. To do this, place the screwdriver (B) on the side where the retaining claws (A) are *not* visible.



3. Insert a new battery. To do this, push one side of the battery under the retaining claw (picture above, A) and then press it into the holder until it audibly engages.

> Observe correct polarity (plus pole upwards, see figure above, C).
>
> Before inserting the new battery: Wipe the battery and contacts with a dry cloth.
>
> Wear gloves made of cotton, rubber, or similar, to protect the battery from contamination.
>
> Ensure that dust or foreign substances cannot cause a short circuit between the poles.

4. Reinstall the CPU board.
5. Connect and switch on the machine.
6. Set time and date (System > Hardware Setup > Realtime Clock).

Related tasks

CPU board replacement on page 249

Related reference

CPU Board on page 229

Power supply replacement

Before you begin

Tools:

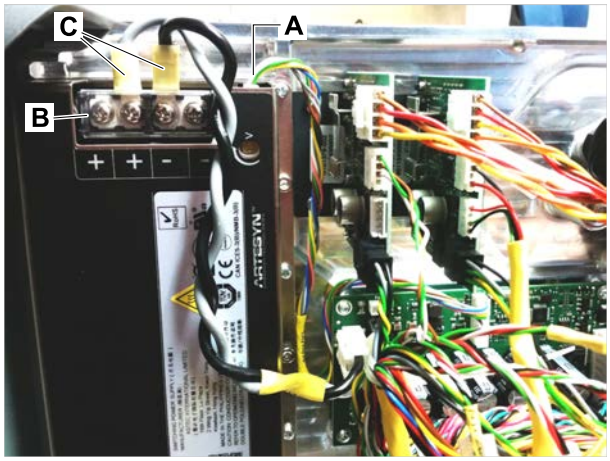
- Screwdriver, small
- Cross-tip screwdriver, medium size
- Hex socket screwdriver, 3 mm

Procedure

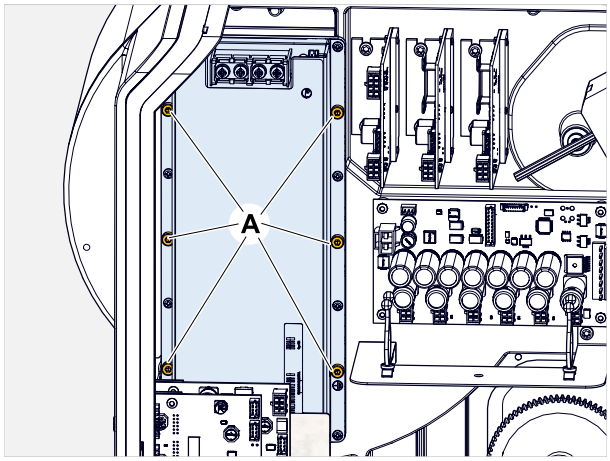
Removing:

1. Switch off the printer. Disconnect the power cable.

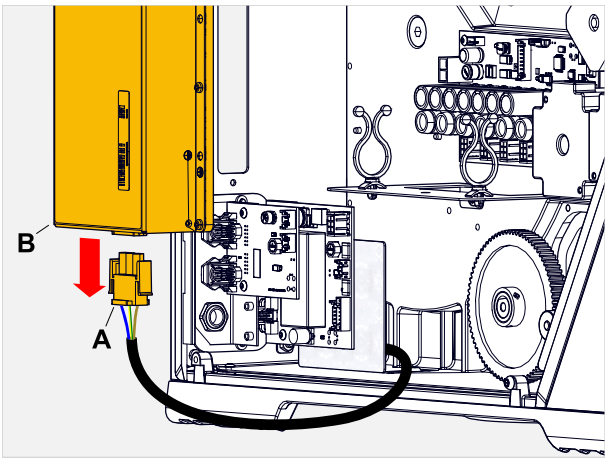
2. Remove the rear hood.
3. Unscrew the CPU board/4-fold output stage from the rear wall (2 screws) and swivel it to the side.
   ‖ The cables do *not* have to be unplugged for this. ‖
4. Disconnect the coloured cable (A) from the power supply unit.



5. Take off the transparent cover (B, picture above).
   ‖ Lever off with a screwdriver. ‖
6. Unscrew the 2 ring eyelets (C, picture above) at the upper end of the power supply.
7. Unscrew the 6 *hex socket* screws (A) on the power supply:



8. Carefully remove the power supply (B) from the printer housing.



9. Disconnect the cable at the lower end of the power supply (A, picture above).

Installing:

10. Perform the installation in the reverse order to the removal.

> Note the polarity of the cables with the eyelets:
>
> – Grey cable: “+”
>
> – Black cable: “-”

Related tasks

Rear hood replacement on page 233
CPU board replacement on page 249

Related reference

Wiring Diagram on page 220
Power Supply on page 231

Settings

CORRECTING THE PRINT POSITION

Describes how to correct the print position for very long labels.

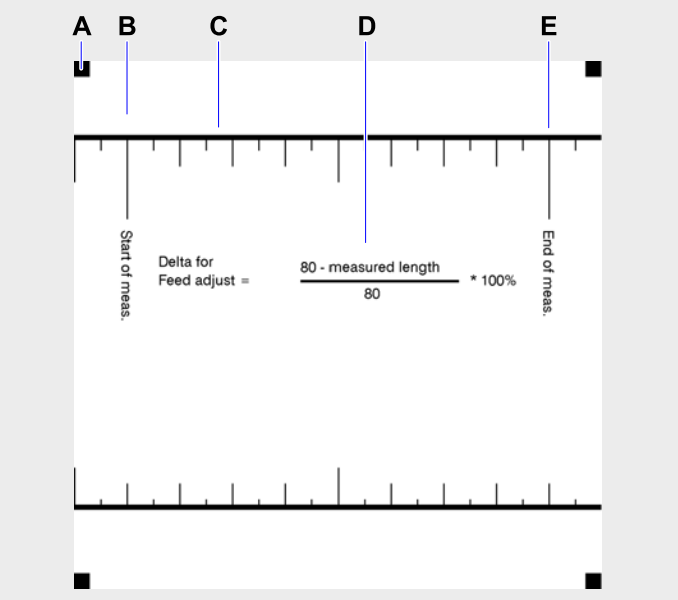
Before you begin

- 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.

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.

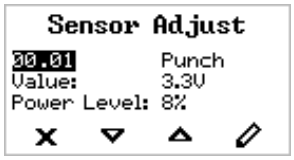
> When checking the sensors, ambient light must be avoided. Therefore keep the front covers and the housing cover closed during the sensor test.

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
00.02	Fullsz	Fullsize sensor	Connector open: 5.0 V
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
00.05	Matend	Material end sensor	• w/o material: 1.0 V • with material: 4.5 V

Sensor ID	Sensor name	Description	Typical values / Test
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
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: 0
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

PRINT HEAD IDLE ADJUSTMENT

Procedure

1. Remove label stock and ribbon from the print module.
2. Place an approx. 10 cm long piece of label material between the print head and print roller.
3. Close the print head pressure lever.
4. Open parameter Tools > Adjustment > Head idle adjust. Display:

   At the same time the print head moves to the print position.
5. Adjust the print head pressure so that the label is easily trapped between the print head and platen roller. To do this, pull the label and at the same time adjust the pressure by pressing the ✚ and ▬ buttons until the required minimum pressure is achieved.

   ✚ : Print head is moved upwards by one step (= less pressure)

   ▬ : Print head is moved down one step (= more pressure)

   Setting range: -30...30
6. Press the ✓ key to save the setting.

Firmware

NOTES ON THE FIRMWARE

There are several ways to update the machine firmware:

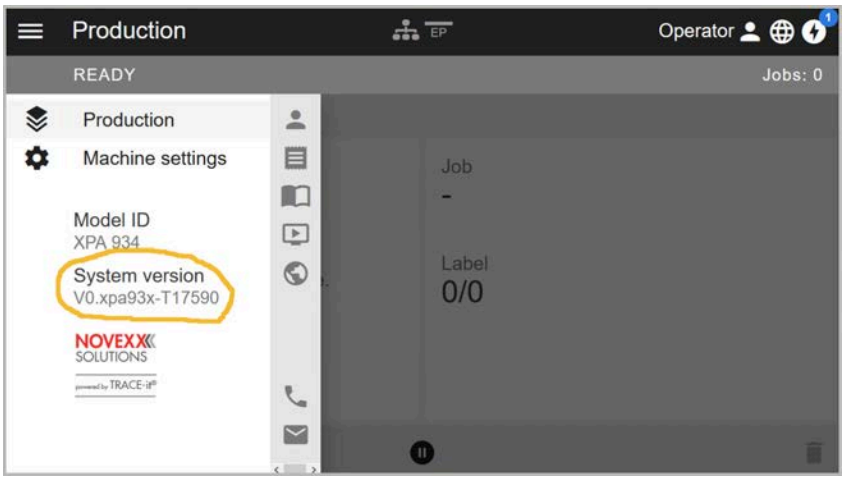
- Via the web panel (recommended)
- Via an external storage medium (e.g. USB thumb drive) in standalone mode

> Compared to previous machine generations, the update process has become much more secure. The new firmware is first written to a second, unused partition. Only when this process has been successfully completed, the system switches to this partition and the machine is rebooted.
>
> In practice, this means that even switching off during the update no longer requires any tricks (previously: update via bootloader). As long as the update is incomplete, the machine restarts with the previous firmware. The update can then simply be restarted.

Determine the installed firmware version

To decide whether a firmware update is possible or necessary, it must first be determined which firmware version is installed in the machine. The following options are available for this:

- *Display after switching on*: The current firmware version is shown on the display a few seconds after switching on
- *Parameter menu*: Info > System > Module FW. Vers. > System version
- *Status printout*: Info > Status Printouts > Printer Status (section „System version“)
- *Web panel*: Call up the main menu (click on the stack symbol in the upper left corner):



Downloading firmware

1. Go to the NOVEXX Solutions website: www.novexx.com.
2. Go to “Service” > “Firmware”.
3. Download the appropriate firmware file for the machine type.

FIRMWARE UPDATE VIA THE WEB PANEL

Before you begin

- The firmware file has been downloaded (www.novexx.com, Service > Firmware)
- The firmware file has the extension `*.tar`
- The firmware file is accessible from the web panel

Procedure

1. Click on “Firmware update” in the administration view of the web panel.
   Appearing window:

2. Click on “Choose Firmware File” (picture above). A file selection dialog opens. Select firmware file.

3. Click on “Upload” (picture above).
   The firmware is installed. A progress bar appears:

   At the same time, the installation progress is displayed on the operation panel of the machine:

```
Firmwareupdate
25%
Extract files
```

Results

After successfully loading and installing the firmware, the machine restarts automatically. While the machine starts up, the individual (electronic) modules are checked and, if necessary, their firmware is updated. The relevant module is displayed in the bottom line:

Fig. 65: Example: The BasicIO module is updated during start-up.

Related reference

Administration view on page 33

UPDATING FIRMWARE FROM AN EXTERNAL STORAGE MEDIUM

Before you begin

The storage medium must be assigned to the drive letter `C:` (i.e. Interface > Drives > Drive C must be set to the storage medium on which the firmware file is located, e.g. “USB thumb drive”)

Procedure

1. Download firmware from: www.novexx.com (Service > Firmware).
2. If not available, create directory `\FORMATS` on the storage medium.
3. Save the firmware file in the directory `\FORMATS`.
   ‖ The file extension must be `*.tar`. ‖
4. Switch off the machine.
5. Plug the storage medium into the machine.
6. Switch on the machine.
7. Press keys 2+4 to switch to standalone mode.
8. Select firmware file.
9. Press key 4. Confirm the query.
   The loading and installation of the firmware starts without further action.

Results

After successfully loading and installing the firmware, the machine restarts automatically. While the machine starts up, the individual (electronic) modules are checked and, if necessary, their firmware is updated. The relevant module is displayed in the bottom line:

Fig. 66: Example: The BasicIO module is updated during start-up.

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.

SETUP FILE

Example of a setup file, created with Tools > Diagnostic > Store Parameters (“With adjust para”).

```
#!A1
#G Machine Setup for XLP 604    Version: V4.T21069
#G Serial number              :  9107077920
#G MAC Address                :  00:55:DA:34:01:69
#G Creation date              :  26.07.2022 12:53

#G----------------------------------------------------------------
#G Favorites
#G----------------------------------------------------------------
#PC1035/2.0                   #G  Head pressure    :  2.0
#G----------------------------------------------------------------
#G Print
#G----------------------------------------------------------------
#PC2045/50                    #G  Print contrast   :  50 %
#PC1035/2.0                   #G  Head pressure    :  2.0
#PC1020/0.0                   #G *X - Printadjust  :  0.0 mm
#PC1021/0.0                   #G *Y - Printadjust  :  0.0 mm
#PC1003/8.0                   #G  Print speed      :  8 Inch/s
#PC1004/8.0                   #G  Feed speed       :  8 Inch/s
#PC1050/8.0                   #G  Backfeed speed   : 8.0 Inch/s
#PC2027/0                     #G  Voltage offset   :   0 %
#PC3306/0                     #G  Head lift autom. : Off
#G----------------------------------------------------------------
#G Print ► Material
#G----------------------------------------------------------------
#G----------------------------------------------------------------
#G Print ► Material ► Label
#G----------------------------------------------------------------
#PC2086/0                     #G  Print method     : Thermo transfer
#PC1005/0                     #G  Material type    : Endless
#PC1008/0.0                   #G  Punch offset     :  0.0 mm
#PC1006/20.0                  #G  Material length  : 20.0 mm
#PC1007/100.0                 #G  Material width   : 100.0 mm
#PC2015/0                     #G  Label sens. type : Punched
#PC1022/0                     #G  Punch mode       : Automatic
#PC1023/128                   #G  Punch level      : 128
```

```
#PC2030/1                    #G  Mat. end detect. : Transparent
#PC1043/100                  #G  Rewinder Tension : 100 %
#G-------------------------------------------------------------
#G Print ► Material ► Ribbon
#G-------------------------------------------------------------
#PC1033/107                  #G  Ribbon width     :  107 mm
#PC1042/100                  #G  Ribbon Rew Tens. : 100 %
#PC1034/100                  #G  Ribbon Unw Tens. : 100 %
#PC1049/0                    #G  Color Side       : inside
#PC1038/600.0                #G  Ribbon length    : 600.0 m
#PC1039/81.3                 #G  Outer ribbon Ø   : 81.3 mm
#PC1040/33.0                 #G  Inner ribbon Ø   : 33.0 mm
#PC2087/0                    #G  Ribbon autoecon. : Off
#PC2077/0.0                  #G  Head down lead   :  0.0 mm
#PC2019/10.0                 #G  Ribb. eco. limit : 10.0 mm
#PC2058/0                    #G  Feed mode        : Head up
#G-------------------------------------------------------------
#G Print ► Format
#G-------------------------------------------------------------
#PC1009/1                    #G  Bar code multip. : * 1
#PC1010/0                    #G  UPC plain-copy   : In line
#PC1011/0                    #G  EAN Readline     : Standard
#PC1012/0                    #G  EAN sep. lines   : With readl. only
#PC1013/1                    #G  Rotated barcodes : Optimized
#PC1027/0                    #G  Print direction  : Foot first
#G-------------------------------------------------------------
#G Dispenser
#G-------------------------------------------------------------
#PC1014/2                    #G  Cut mode         : Normal 1:1 mode
#PC1017/0.0                  #G  Dispenseposition :  0.0 mm
#PC2040/0                    #G  Dispensing edge  : short
#PC2001/24.5                 #G  Head disp dist.  : 24.5 mm
#PC2004/0                    #G  Display mode     : Labelnr/jobquant
#PC2005/7                    #G *Dispense counter : 7
#G-------------------------------------------------------------
#G Dispenser ► Real 1:1
#G-------------------------------------------------------------
#PC2034/0                    #G  Dispensing mode  : fast
#PC2059/100                  #G  Max InitFeedback :  100 mm
#G-------------------------------------------------------------
#G Dispenser ► Speed
#G-------------------------------------------------------------
#PC1003/8.0                  #G  Print speed      :  8 Inch/s
#PC1004/8.0                  #G  Feed speed       :  8 Inch/s
#G-------------------------------------------------------------
#G Dispenser ► Speed ► Speed Adaption
#G-------------------------------------------------------------
#PC6005/0                    #G  Speed Adaption   : Off
#PC6006/1                    #G  Encoder Type     : 2 Phases normal
#PC6008/500                  #G  Encoder Resol.   :  500 pulses/turn
#PC6009/64.0                 #G  Encoder Diameter :  64.0mm   0.0var
#PC6048/3.0                  #G  Min. APSF Speed  : 3.0 Inch/s
#G-------------------------------------------------------------
#G Dispenser ► Start Signal
#G-------------------------------------------------------------
#PC6004/15.0                 #G  Start offset     : 15.0 mm
#PC2043/0                    #G  Start print mode : Pulse falling
#PC2035/0                    #G  Application mode : Save mode
#PC2039/0                    #G  Start source     : Light barrier
#PC6014/0                    #G  Start error stop : Off
#PC6017/0.0                  #G  Product length   :  0.0 mm
#PC6035/0                    #G  Multi label mode : Off
#PC6036/25.0                 #G  Label 2 offset   : 25.0 mm
#PC6037/25.0                 #G  Label 3 offset   : 25.0 mm
```

```
#G-------------------------------------------------------------------
#G Options
#G-------------------------------------------------------------------
#PC2063/1                    #G  Keyboard         : English
#G-------------------------------------------------------------------
#G Options ▶ Selection
#G-------------------------------------------------------------------
#G-------------------------------------------------------------------
#G Options ▶ Selection ▶ Periph. device
#G-------------------------------------------------------------------
#PC2031/1                    #G  Periph. device   : Cutter
#PC1019/1                    #G  Rewind direction : Printing outside
#G-------------------------------------------------------------------
#G Options ▶ Selection ▶ 8IO 1
#G-------------------------------------------------------------------
#PC3252/1                    #G  USI Emulation    : Standard
#G-------------------------------------------------------------------
#G Options ▶ Selection ▶ 8IO 1 ▶ Applicator
#G-------------------------------------------------------------------
#PC3101/6                    #G  Applicator type  : Direct Dispense
#PC3251/0                    #G  Extension signals: Off
#G-------------------------------------------------------------------
#G Options ▶ Selection ▶ BasicIO
#G-------------------------------------------------------------------
#PC3250/1                    #G  Status signals   : On
#PC3270/1                    #G  Input signals    : reprint/pause input
#G-------------------------------------------------------------------
#G Options ▶ Cutter
#G-------------------------------------------------------------------
#PC1014/2                    #G  Cut mode         : Normal 1:1 mode
#PC1015/3                    #G  Cut speed        : 3
#PC1016/120                  #G  Cut width        : 120
#PC1017/0.0                  #G  Cut position     :  0.0 mm
#PC1018/0.0                  #G  Double cut       :  0.0 mm
#PC1041/1                    #G  Rest position    : at head
#G-------------------------------------------------------------------
#G Options ▶ Rewinder
#G-------------------------------------------------------------------
#PC1019/1                    #G  Rewind direction : Printing outside
#G readonly   ID=30074       #G  Rewinder Values  :   3100<-Hall->27300
#PC5123/32832                #G *Rewinder adjust  : 32832
#G-------------------------------------------------------------------
#G Options ▶ Tear-off edge
#G-------------------------------------------------------------------
#PC1017/0.0                  #G  Dispenseposition :  0.0 mm
#G-------------------------------------------------------------------
#G Options ▶ Internal Rewinder
#G-------------------------------------------------------------------
#PC1043/100                  #G  Rewinder Tension : 100 %
#PC1019/1                    #G  Rewind direction : Printing outside
#G-------------------------------------------------------------------
#G Options ▶ Dispenser
#G-------------------------------------------------------------------
#PC1014/2                    #G  Cut mode         : Normal 1:1 mode
#PC1017/0.0                  #G  Cut position     :  0.0 mm
#PC2040/0                    #G  Dispensing edge  : short
#PC3011/0                    #G  Apply mode       : After start sig.
#PC2001/24.5                 #G  Head disp dist.  : 24.5 mm
#PC2004/0                    #G  Display mode     : Labelnr/jobquant
#PC2005/7                    #G *Dispense counter : 7
#PC2035/0                    #G  Application mode : Save mode
#G-------------------------------------------------------------------
#G Options ▶ Dispenser ▶ Real 1:1
#G-------------------------------------------------------------------
```

```
#PC2034/0                      #G  Dispensing mode  : fast
#PC2059/100                    #G  Max InitFeedback :  100 mm
#G-------------------------------------------------------------------
#G Options ▶ Dispenser ▶ Speed
#G-------------------------------------------------------------------
#PC1003/8.0                    #G  Print speed      :  8 Inch/s
#PC1004/8.0                    #G  Feed speed       :  8 Inch/s
#G-------------------------------------------------------------------
#G Options ▶ Dispenser ▶ Speed ▶ Speed Adaption
#G-------------------------------------------------------------------
#PC6005/0                      #G  Speed Adaption   : Off
#PC6006/1                      #G  Encoder Type     : 2 Phases normal
#PC6008/500                    #G  Encoder Resol.   :  500 pulses/turn
#PC6009/64.0                   #G  Encoder Diameter :  64.0mm   0.0var
#PC6048/3.0                    #G  Min. APSF Speed  : 3.0 Inch/s
#G-------------------------------------------------------------------
#G Options ▶ Dispenser ▶ Start Signal
#G-------------------------------------------------------------------
#PC6004/15.0                   #G  Start offset     : 15.0 mm
#PC2043/0                      #G  Start print mode : Pulse falling
#PC2035/0                      #G  Application mode : Save mode
#PC2039/0                      #G  Start source     : Light barrier
#PC6014/0                      #G  Start error stop : Off
#PC6017/0.0                    #G  Product length   :  0.0 mm
#PC6035/0                      #G  Multi label mode : Off
#PC6036/25.0                   #G  Label 2 offset   : 25.0 mm
#PC6037/25.0                   #G  Label 3 offset   : 25.0 mm
#G-------------------------------------------------------------------
#G Options ▶ LTMA
#G-------------------------------------------------------------------
#PC3152/0                      #G  Apply mode       : After start sig.
#PC3153/190                    #G  Stroke length    :  190 mm
#PC3154/0                      #G  Appl. waitpos.   :    0 mm
#PC3155/350.0                  #G  Applicator speed : 350 mm/s
#PC3158/0                      #G  Restart delay    :    0 ms
#G-------------------------------------------------------------------
#G Options ▶ 8IO 1
#G-------------------------------------------------------------------
#G-------------------------------------------------------------------
#G Options ▶ 8IO 1 ▶ Direct Dispense
#G-------------------------------------------------------------------
#PC3102/0                      #G  Apply mode       : After start sig.
#PC3116/0                      #G  Lab release time :    0 ms
#PC3106/1                      #G  Dwell time       :    1 ms
#PC3107/1                      #G  Blow on time     :    1 ms
#PC3115/80                     #G  Stop lag time    :   80 ms
#PC3117/99                     #G  TouchDownTimeout : Off
#PC3109/2000                   #G  Position timeout :  2000 ms
#PC3108/0                      #G  Restart delay    :    0 ms
#PC3111/0                      #G  Apply comp. time :    0 ms
#PC3119/0                      #G  Label pres. senso: Off
#G-------------------------------------------------------------------
#G Options ▶ 8IO 1 ▶ USI Emulation
#G-------------------------------------------------------------------
#PC3211/0                      #G  Cycle mode       : Mode0 inactive
#PC3213/0                      #G  Cycle end delay  :    0 ms
#PC3214/20                     #G  Cycle end pulse w:   20 ms
#PC3215/1                      #G  Ribbon low signal: On
#PC3216/0                      #G  Material low sign: Off
#PC3217/1                      #G  Machine status le: Level high active
#PC3218/1                      #G  Error signal leve: Level high active
#PC3219/0                      #G  Warning signal le: Level low active
#PC3204/0                      #G  Reprint input    : Off
#PC3205/0                      #G  Feed input       : Off
```

```
#PC3206/0                      #G  Pause input      : Off
#G-------------------------------------------------------------------
#G Options ▶ 8IO 2
#G-------------------------------------------------------------------
#G-------------------------------------------------------------------
#G Options ▶ 8IO 3
#G-------------------------------------------------------------------
#G-------------------------------------------------------------------
#G Options ▶ BasicUSI
#G-------------------------------------------------------------------
#PC3280/0                      #G  Cycle mode       : Mode0 inactive
#PC3281/0                      #G  Cycle end delay  :     0 ms
#PC3282/20                     #G  Cycle end pulse w:    20 ms
#PC3283/1                      #G  Ribbon low signal: On
#PC3284/0                      #G  Material low sign: Off
#PC3285/0                      #G  Machine status le: Level low active
#PC3286/0                      #G  Error signal leve: Level low active
#PC3287/1                      #G  Warning signal le: Level high active
#PC3288/0                      #G  Reprint input    : Off
#PC3289/0                      #G  Feed input       : Off
#PC3290/0                      #G  Pause input      : Off
#G-------------------------------------------------------------------
#G Options ▶ BasicUSI ▶ Start Sensor
#G-------------------------------------------------------------------
#PC2043/0                      #G  Start print mode : Pulse falling
#PC6014/0                      #G  Start error stop : Off
#PC2042/0                      #G  Start signal     : Off
#G-------------------------------------------------------------------
#G Options ▶ BasicIO
#G-------------------------------------------------------------------
#PC3271/0                      #G  Reprint input    : Off
#PC3272/0                      #G  Pause input      : Off
#G-------------------------------------------------------------------
#G Options ▶ BasicIO ▶ Start Sensor
#G-------------------------------------------------------------------
#PC2043/0                      #G  Start print mode : Pulse falling
#PC6014/0                      #G  Start error stop : Off
#PC2042/0                      #G  Start signal     : Off
#G-------------------------------------------------------------------
#G Options ▶ BasicIO ▶ Material OD Sensor
#G-------------------------------------------------------------------
#PC6050/0                      #G  Mat. OD Sensor 1 : Off
#PC6051/0                      #G  Mat. OD Sensor 2 : Off
#PC2075/60                     #G  Materialend error: Mat.diam < 60mm
#PC2074/80                     #G  Materialend warni: Mat.diam < 80mm
#PC6022/0                      #G  Ext. OD sensor   : Off
#G-------------------------------------------------------------------
#G System
#G-------------------------------------------------------------------
#PC2051/1                      #G  Language         : English
#PC2053/0                      #G  Access authoriz. : Off
#PC2090/**********#G           #G  Operator password: **********
#PC2091/**********#G           #G  Supervisor passwo: **********
#PC2092/**********#G           #G  Service password : **********
#PC2089/0                      #G  Setup Wizards    : All
#PC2081/0                      #G  Run Setup Wizard?: No
#PC2020/1                      #G  Turn-on mode     : Ready
#G-------------------------------------------------------------------
#G System ▶ Hardware Setup
#G-------------------------------------------------------------------
#PC2098/850                    #G *Head resistance  :  850 Ohm
#PC2024/1000                   #G *Head resistance  : 1000 Ohm
#PC2025/1000                   #G *Head resistance  : 1000 Ohm
#PC2080/1530                   #G *Head resistance  : 1530 Ohm
```

```
#PC1533/0.0                    #G  Time zone        : +0:00
#G-------------------------------------------------------------------
#G System ► Hardware Setup ► Printhead type seq.
#G-------------------------------------------------------------------
#PC5002/0                      #G *Printhead type   : KCE 4Inch
#G-------------------------------------------------------------------
#G System ► Hardware Setup ► Printer type
#G-------------------------------------------------------------------
#PC5001/3                      #G *Printer type     : XLP 60x
#PC5002/0                      #G *Printhead type   : KCE 4Inch
#G-------------------------------------------------------------------
#G System ► Print Control
#G-------------------------------------------------------------------
#PC2029/2                      #G  Miss. label tol. : 2
#PC2067/1                      #G  Gap detect. mode : Autom. forward
#PC2059/100                    #G  Max InitFeedback :  100 mm
#PC2068/5                      #G  Ribb. stretching : Feedback:  5 mm
#PC2033/1                      #G  Singlestartquant : 1
#PC2050/0                      #G  Reprint function : Off
#PC2083/25.0                   #G  Ribbon end warn. : 25.0 m
#PC2003/36.3                   #G  Ribbon end warn. : 36.3 mm
#PC2060/0                      #G  Ribbon warn stop : Off
#PC2022/1                      #G  Error reprint    : On
#PC2023/0                      #G  Single-job mode  : Off
#PC2026/20                     #G  Temp. reduction  :  20 %
#PC2049/0                      #G  Print info mode  : Par.values right
#G-------------------------------------------------------------------
#G System ► Display Setup
#G-------------------------------------------------------------------
#PC2102/50                     #G  Brightness       :  50 %
#PC2103/300                    #G  Screensaver timeo:  300 s
#PC2104/1                      #G  Screensaver      : On
#G-------------------------------------------------------------------
#G Printer Language
#G-------------------------------------------------------------------
#PC2012/0                      #G  Print Interpret. : Easyplug
#G-------------------------------------------------------------------
#G Printer Language ► EasyPlug Setting
#G-------------------------------------------------------------------
#PC2014/0                      #G  Character filter : Chars >= 20Hex
#PC2013/9                      #G  Character sets   : IBM
#PC2071/0                      #G  EasyPlug errors  : Tolerant handl.
#PC2085/0                      #G  EasyPlug warning : On
#PC1102/0                      #G  Spooler mode     : Mult. print jobs
#PC1550/0                      #G  StandAlone Input : None
#PC5310/0                      #G  ##VW/I Interface : Easyplug
#PC1103/1                      #G *Printer ID no.   : 1
#PC5004/0                      #G  Command sequence : '##'
#PC5311/0                      #G  Ignore ##IM cmd. : No
#G-------------------------------------------------------------------
#G Printer Language ► ZPL Setting
#G-------------------------------------------------------------------
#PC4002/15                     #G  Darkness         : 15
#PC4006/0                      #G  Label Top        : 0 Dots
#PC4007/0                      #G  Left Position    : 0 Dots
#PC4010/0                      #G  Error Indication : OFF
#PC4011/0                      #G  Error Checking   : YES
#PC4009/0                      #G  Resolution       : 300 DPI
#PC4012/0                      #G  305 DPI Scaling  : YES
#PC4013/0                      #G  Image Save Path  : Internal RAM
#PC4017/0                      #G  Label Invert     : Disable
#G-------------------------------------------------------------------
#G Printer Language ► ZPL Setting ► Commands
#G-------------------------------------------------------------------
```

```
#PC4004/94                      #G  Format Prefix    : 5EH
#PC4003/126                     #G  Control Prefix   : 7EH
#PC4005/44                      #G  Delimiter Char   : 2CH
#PC4014/1                       #G  Command ^PR      : Enable
#PC4015/1                       #G  Command ^MT      : Enable
#PC4016/1                       #G  Command ^JM      : Enable
#PC4018/1                       #G  Command ^MD/~SD  : Enable
#G---------------------------------------------------------------
#G Interface
#G---------------------------------------------------------------
#PC1101/6                       #G  Print interface  : Automatic
#PC2072/0                       #G  Home mode        : Interf. disabled
#G---------------------------------------------------------------
#G Interface ► Network
#G---------------------------------------------------------------
#PC1501/0                       #G  IP Addressassign : DHCP
#PC1502/192.168.001.099         #G *IP address       : 192.168.001.099
#G readonly   ID=30001          #G  IP address       : 10.220.1.226
#PC1503/255.255.255.000         #G *Net mask         : 255.255.255.000
#G readonly   ID=30002          #G  Net mask         : 255.255.252.0
#PC1504/000.000.000.000         #G *Gateway address  : 000.000.000.000
#G readonly   ID=30003          #G  Gateway address  : 10.220.3.255
#PC1505/9100                    #G  Port address     : 9100
#PC1513/nxx-340169#G            #G  DHCP host name   : nxx-340169
#G---------------------------------------------------------------
#G Interface ► Network ► Services
#G---------------------------------------------------------------
#PC1509/1                       #G  WEB server       : On
#PC1507/0                       #G  FTP server       : Off
#PC1536/0                       #G  Wi-Fi            : Off
#PC1537/0                       #G  MQTT broker      : Off
#PC1538/-1062731420             #G  MQTT broker IP   : 192.168.001.100
#PC1529/0                       #G  Time client      : Off
#PC1533/0.0                     #G  Time zone        : +0:00
#PC1530/-2105212662             #G  Time server IP   : 130.133.001.010
#PC1531/3600                    #G  Sync. interval   : 3600 s
#G---------------------------------------------------------------
#G Interface ► Serial Port 1
#G---------------------------------------------------------------
#PC1201/8                       #G  Baud rate        : 115200 Baud
#PC1202/8                       #G  No. of data bits : 8
#PC1203/2                       #G  Parity           : None
#PC1204/1                       #G  Stop bits        : 1 Bit
#PC1205/0                       #G  Data synch.      : RTS/CTS
#PC1206/0                       #G  Serial port mode : RS232
#PC1207/1                       #G  Frame error      : Display
#G---------------------------------------------------------------
#G Interface ► Serial Port 2
#G---------------------------------------------------------------
#PC1302/8                       #G  Baud rate        : 115200 Baud
#PC1303/8                       #G  No. of data bits : 8
#PC1304/2                       #G  Parity           : None
#PC1305/1                       #G  Stop bits        : 1 Bit
#PC1306/0                       #G  Data synch.      : RTS/CTS
#PC1307/0                       #G  Serial port mode : RS232
#PC1308/1                       #G  Frame error      : Display
#G---------------------------------------------------------------
#G Interface ► Serial Port 3
#G---------------------------------------------------------------
#PC1351/2                       #G  Baud rate        : 9600 Baud
#PC1353/8                       #G  No. of data bits : 8
#PC1354/1                       #G  Parity           : None
#PC1355/2                       #G  Stop bits        : Automatic
#PC1356/0                       #G  Data synch.      : RTS/CTS
```

```
#PC1357/0                    #G  Serial port mode : RS232
#PC1358/1                    #G  Frame error      : Display
#G-------------------------------------------------------------------
#G Interface ► Serial Port 4
#G-------------------------------------------------------------------
#PC1361/2                    #G  Baud rate        : 9600 Baud
#PC1363/8                    #G  No. of data bits : 8
#PC1364/1                    #G  Parity           : None
#PC1365/2                    #G  Stop bits        : 2 Bit
#PC1366/0                    #G  Data synch.      : RTS/CTS
#PC1368/1                    #G  Frame error      : Display
#G-------------------------------------------------------------------
#G Interface ► Drives
#G-------------------------------------------------------------------
#PC1600/1                    #G  Drive C          : Internal Flash
#PC1601/2                    #G  Drive D          : USB1
#PC1602/3                    #G  Drive E          : USB2
#PC1603/4                    #G  Drive F          : Front USB
#G-------------------------------------------------------------------
#G Tools
#G-------------------------------------------------------------------
#G-------------------------------------------------------------------
#G Tools ► Diagnostic
#G-------------------------------------------------------------------
#PC5005/0                    #G  EasyPl. file log : Off
#PC5113/0                    #G  EasyPlug Monitor : Off
#PC5125/0                    #G  EP Monitor Mode  : Interpreter data
#PC5111/0                    #G  Spec parameter 1 : 0
#PC5112/0                    #G  Spec parameter 2 : 0
#G-------------------------------------------------------------------
#G Tools ► Diagnostic ► User modified
#G-------------------------------------------------------------------
#PC5115/8                    #G *Matend adjust    : 8
#PC3252/1                    #G  USI Emulation    : Standard
#PC1006/20.0                 #G  Material length  : 20.0 mm
#PC1014/2                    #G  Cut mode         : Normal 1:1 mode
#PC2005/7                    #G *Dispense counter : 7
#PC2031/1                    #G  Periph. device   : Cutter
#PC6036/25.0                 #G  Label 2 offset   : 25.0 mm
#PC6037/25.0                 #G  Label 3 offset   : 25.0 mm
#PC5137/-1                   #G *Head idle adjust : -1
#PC1501/0                    #G  IP Addressassign : DHCP
#PC1513/nxx-340169#G         #G  DHCP host name   : nxx-340169
#PC1509/1                    #G  WEB server       : On
#G-------------------------------------------------------------------
#G Tools ► Test
#G-------------------------------------------------------------------
#G-------------------------------------------------------------------
#G Tools ► Service
#G-------------------------------------------------------------------
#G-------------------------------------------------------------------
#G Tools ► Adjustment
#G-------------------------------------------------------------------
#PC5101/35                   #G  Matend tolerance :   35 mm
#PC5106/100                  #G  Matend threshold : 100
#PC5102/0.0                  #G  Feed adjust      : 0.0 % [ribbon]
#PC5105/0.0                  #G  Feed adjust      : 0.0 % [direct]
#PC1031/100.0                #G  Forw feed rat.   : 100.0 %
#PC1032/100.0                #G  Backw feed rat.  : 100.0 %
#PC5103/0.0                  #G *Ribbon feed adj. : 0.0 %
#PC5116/29                   #G *Punch adjust     : 29
#PC5117/78                   #G *Reflex adjust    : 78
#PC5134/78                   #G *Reflex(top) adj. : 78
#PC5115/8                    #G *Matend adjust    : 8
```

```
#PC5120/50                    #G *Head sens adjust : 50
#PC5130/100                   #G *Aux adjust       : 100
#PC5104/0.0                   #G *Punch y calibr.  :  0.0 mm
#PC5137/-1                    #G *Head idle adjust : -1
#PC5136/0.0                   #G *Head press. adjus:  0.0
#G-----------------------------------------------------------------
#G Tools ► Internal Flash
#G-----------------------------------------------------------------
#G-----------------------------------------------------------------
#G Info
#G-----------------------------------------------------------------
#G readonly   ID=30076        #G  Model ID         : XLP 604
#G readonly   ID=30086        #G  PnP Hardware ID  : NovexxXLP6041155
#G readonly   ID=30077        #G  Printer-Model    : XLP 60x
#G readonly   ID=30078        #G  Printhead        : 4
#G readonly   ID=30079        #G  Printhead dpi    : 305
#G readonly   ID=30080        #G  Printhead Dot/mm : 12.000000
#G-----------------------------------------------------------------
#G Info ► Status Printouts
#G-----------------------------------------------------------------
#G-----------------------------------------------------------------
#G Info ► Statistics
#G-----------------------------------------------------------------
#G readonly   ID=30018        #G  Head run length  : 3 m
#G readonly   ID=30019        #G  Roll run length  : 13 m
#G readonly   ID=30020        #G  Cuts on knife    : 50
#G readonly   ID=30024        #G  Total head moves : 39
#G readonly   ID=30014        #G  Serv. operations : 0
#G readonly   ID=30015        #G  Head number      : 0
#G readonly   ID=30016        #G  Roll number      : 0
#G readonly   ID=30017        #G  Cutter number    : 0
#G readonly   ID=30023        #G  Total cuts       : 50
#G readonly   ID=30021        #G  Tot. mat. length : 13 m
#G readonly   ID=30022        #G  Tot. ribb. length: 8 m
#G readonly   ID=30025        #G  Head strobes     : 27419
#G readonly   ID=30028        #G  Operation time   : 0 hours  4 min
#G readonly   ID=30082        #G  Total Operation  : 30 hours  40 min
#G-----------------------------------------------------------------
#G Info ► Statistics ► Print head
#G-----------------------------------------------------------------
#G readonly   ID=30093        #G  Head run length  : 18 m
#G readonly   ID=30094        #G  Head strobes     : 178236
#G readonly   ID=30098        #G  Total head moves : 33
#G readonly   ID=30095        #G  Operation time   : 1169 hours  24 min
#G-----------------------------------------------------------------
#G Info ► Statistics ► Print head ► Contrast distribution
#G-----------------------------------------------------------------
#G readonly   ID=30224        #G  0-25%            : 0.0%
#G readonly   ID=30225        #G  26-50%           : 0.0%
#G readonly   ID=30226        #G  51-75%           : 99.0%
#G readonly   ID=30227        #G  76-100%          : 1.0%
#G readonly   ID=30228        #G  101-120%         : 0.0%
#G-----------------------------------------------------------------
#G Info ► Statistics ► Print head ► Head Press. Distribution
#G-----------------------------------------------------------------
#G readonly   ID=30229        #G  1.0-1.5          : 0.0%
#G readonly   ID=30230        #G  1.6-2.0          : 100.0%
#G readonly   ID=30231        #G  2.1-2.5          : 0.0%
#G readonly   ID=30232        #G  2.6-3.0          : 0.0%
#G-----------------------------------------------------------------
#G Info ► Statistics ► Print head ► Thermal distribution
#G-----------------------------------------------------------------
#G readonly   ID=30096        #G  Transfer         : 100.0%
#G readonly   ID=30097        #G  Direct           : 0.0%
```

```
#G----------------------------------------------------------------
#G Info ► Statistics ► Print head ► Print speed distribution
#G----------------------------------------------------------------
#G readonly   ID=30233        #G  2-5in/s          : 0.0%
#G readonly   ID=30234        #G  6-9in/s          : 100.0%
#G readonly   ID=30235        #G  10-13in/s        : 0.0%
#G readonly   ID=30236        #G  14-16in/s        : 0.0%
#G----------------------------------------------------------------
#G Info ► System
#G----------------------------------------------------------------
#G----------------------------------------------------------------
#G Info ► System ► Module FW. Vers.
#G----------------------------------------------------------------
#G readonly   ID=30004        #G  System version   : V4.T21069
#G readonly   ID=30067        #G  System revision  : 21069
#G readonly   ID=30070        #G  System date      : Jul 26 2022
#G readonly   ID=30059        #G  Operator panel   : V4.38
#G readonly   ID=30521        #G  Ribbon unwinder  : V1.033
#G readonly   ID=30541        #G  Ribbon rewinder  : V1.033
#G readonly   ID=30601        #G  TPH power        : V1.031
#G readonly   ID=30621        #G  BasicIO          : V1.031
#G readonly   ID=30641        #G  8IO 1            : V1.031
#G readonly   ID=30721        #G  Ribbon feed      : V1.031
#G readonly   ID=30781        #G  Cutter           : V1.031
#G----------------------------------------------------------------
#G Info ► System ► Memory Data
#G----------------------------------------------------------------
#G readonly   ID=30007        #G  RAM memory size  : 1009 MB
#G readonly   ID=30091        #G  Space for RAM dis: 20MB/21MB (/v)
#G readonly   ID=30081        #G  Storage media    : Internal Flash,In►
ternal RAM
#G readonly   ID=30090        #G  Internal Flash   : 0.80GB/1GB (/v)
#G readonly   ID=30065        #G  USB1             : - (Not assigned)
#G readonly   ID=30066        #G  USB2             : - (Not assigned)
#G readonly   ID=30099        #G  Front USB        : - (Not assigned)
#G readonly   ID=30064        #G  SD card          : - (Not assigned)
#G readonly   ID=30092        #G  Spooler size     : 8192 KB
#G readonly   ID=30010        #G  Space for Jobs   : 20.1 MB
#G readonly   ID=30011        #G  Max. Labellength : 4902 mm
#G readonly   ID=30013        #G  Custom defaults  : No
#G----------------------------------------------------------------
#G Info ► System ► CPU board
#G----------------------------------------------------------------
#G readonly   ID=30034        #G  CPU identifier   : ARMv7 Processor rev
#G readonly   ID=30037        #G  FPGA version     : BE32A210
#G readonly   ID=30500        #G  Module name      :
 MCPU_IMX6_792MHz_2GB-pSLC_1MB-F_
#G readonly   ID=30502        #G  MAC Address      : 00:55:DA:34:01:69
#G readonly   ID=30503        #G  Module part numb.: N101605-002
#G readonly   ID=30504        #G  PCB part number  : PCB0022-001
#G readonly   ID=30505        #G  Serial number    : 9107077920
#G readonly   ID=30506        #G  Production date  : 30.04.2020
#G readonly   ID=30508        #G  Module type      : MCPU
#G----------------------------------------------------------------
#G Info ► System ► Operator panel
#G----------------------------------------------------------------
#G readonly   ID=30068        #G  Serial number    : A108023220250188
#G----------------------------------------------------------------
#G Info ► System ► Ribbon unwinder
#G----------------------------------------------------------------
#G readonly   ID=30520        #G  Module name      :
 MCB_KV11_75MHz_24V_2S-4A_2B-4A_C
#G readonly   ID=30523        #G  Module part numb.: N101377-001
#G readonly   ID=30525        #G  Serial number    : 9106878385
```

```
#G readonly   ID=30526        #G  Production date  : 21.06.2019
#G readonly   ID=30527        #G  CAN MAC address  : 100203
#G readonly   ID=30528        #G  Module type      : BLDC
#G-------------------------------------------------------------
#G Info ► System ► Ribbon rewinder
#G-------------------------------------------------------------
#G readonly   ID=30540        #G  Module name      :
 MCB_KV11_75MHz_24V_2S-4A_2B-4A_C
#G readonly   ID=30543        #G  Module part numb.: N101377-001
#G readonly   ID=30545        #G  Serial number    : 9106878385
#G readonly   ID=30546        #G  Production date  : 21.06.2019
#G readonly   ID=30547        #G  CAN MAC address  : 100202
#G readonly   ID=30548        #G  Module type      : BLDC
#G-------------------------------------------------------------
#G Info ► System ► TPH power
#G-------------------------------------------------------------
#G readonly   ID=30600        #G  Module name      :
 TPHC_KV11_75MHz_24V_CAN
#G readonly   ID=30603        #G  Module part numb.: N101239-001
#G readonly   ID=30605        #G  Serial number    : 99105100045
#G readonly   ID=30606        #G  Production date  : 21.04.2020
#G readonly   ID=30607        #G  CAN MAC address  : 0001C6
#G readonly   ID=30608        #G  Module type      : TPHC
#G-------------------------------------------------------------
#G Info ► System ► BasicIO
#G-------------------------------------------------------------
#G readonly   ID=30620        #G  Module name      : IO►
BA_20W_KV11_75MHz_24-48V_24V_9
#G readonly   ID=30623        #G  Module part numb.: N101381-001
#G readonly   ID=30625        #G  Serial number    : 99072400084
#G readonly   ID=30626        #G  Production date  : 24.10.2019
#G readonly   ID=30627        #G  CAN MAC address  : 00010D
#G readonly   ID=30628        #G  Module type      : IOBA
#G-------------------------------------------------------------
#G Info ► System ► 8IO 1
#G-------------------------------------------------------------
#G readonly   ID=30640        #G  Module name      :
 IOEX_KV11_75MHz_24V_24V_8I-8O_CA
#G readonly   ID=30643        #G  Module part numb.: N101382-000
#G readonly   ID=30645        #G  Serial number    : 99022700020
#G readonly   ID=30646        #G  Production date  : 21.03.2019
#G readonly   ID=30647        #G  CAN MAC address  : 227020
#G readonly   ID=30648        #G  Module type      : IOEX
#G-------------------------------------------------------------
#G Info ► System ► Ribbon feed
#G-------------------------------------------------------------
#G readonly   ID=30720        #G  Module name      :
 STEP_KV11_75MHz_24-48V_4A_CAN
#G readonly   ID=30723        #G  Module part numb.: N101379-002
#G readonly   ID=30725        #G  Serial number    : 99115400002
#G readonly   ID=30726        #G  Production date  : 27.04.2020
#G readonly   ID=30727        #G  CAN MAC address  : 2000B4
#G readonly   ID=30728        #G  Module type      : STEP
#G-------------------------------------------------------------
#G Info ► System ► Cutter
#G-------------------------------------------------------------
#G readonly   ID=30780        #G  Module name      :
 STEP_KV11_75MHz_24-48V_4A_CAN
#G readonly   ID=30783        #G  Module part numb.: N101379-002
#G readonly   ID=30785        #G  Serial number    : 99115400028
#G readonly   ID=30786        #G  Production date  : 27.04.2020
#G readonly   ID=30787        #G  CAN MAC address  : 2000AF
#G readonly   ID=30788        #G  Module type      : STEP
#G-------------------------------------------------------------
```

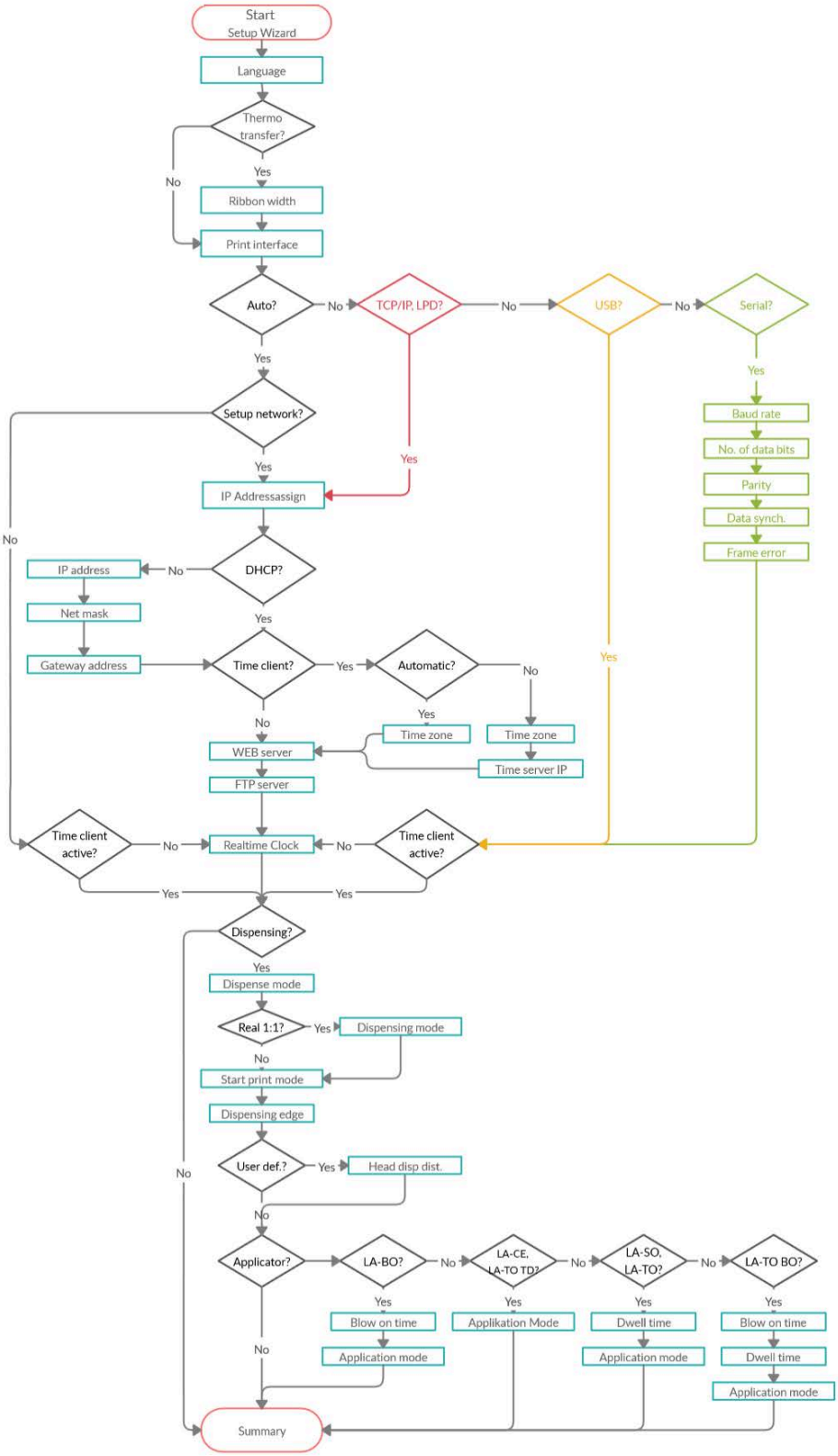
```
#G Info ► System ► Power Supply
#G--------------------------------------------------------------------
#G readonly   ID=30660        #G  Module name      : LCC600-28U-9P
#G readonly   ID=30663        #G  Module part numb.: N101247-001
#G readonly   ID=30665        #G  Serial number    : K618WJ0224AAC
#G readonly   ID=30666        #G  Production date  : 01.08.2019
#G readonly   ID=30668        #G  Module type      : SMPS
#G readonly   ID=30672        #G  Version          : AA
#G--------------------------------------------------------------------
#G Info ► System ► Print head
#G--------------------------------------------------------------------
#G readonly   ID=30680        #G  Module name      : KCE-107-12PAT2-NOV
#G readonly   ID=30683        #G  Module part numb.: N101785-000
#G readonly   ID=30685        #G  Serial number    : CNVA97-90044R1330JP
#G readonly   ID=30686        #G  Production date  : 7/2019
#G readonly   ID=30688        #G  Module type      : PRHD
#G readonly   ID=30689        #G  Resolution       : 12.00
#G readonly   ID=30690        #G  Width            : 106.67
#G readonly   ID=30691        #G  Resistance       : 1330
#G--------------------------------------------------------------------
#G Info ► Measurements
#G--------------------------------------------------------------------
#G readonly   ID=30087        #G  Ribb. rest length: 65535 m
#G readonly   ID=30026        #G  Ribbon diameter  : 72.9 mm
#G readonly   ID=30083        #G  Ribb. rewinder Ø : 58.2 mm
#G readonly   ID=30111        #G  Mat. rewinder Ø  : in progress
#G readonly   ID=30071        #G  Head temperature : 25.2 °C
#G--------------------------------------------------------------------
#G Debug
#G--------------------------------------------------------------------
#PC5127/0                     #G  Debug interface  : Off
#PC5128/182190379             #G  Debug IP address : 010.220.001.043
#PC5124/0                     #G  Debug mask       : 0
#PC5411/0                     #G  BLDC Control     : Off
#PC5404/0                     #G  Fields           : Off
#PC5400/0                     #G  Label generation : Off
#PC5401/0                     #G  Print handling   : Off
#PC5402/0                     #G  Variables        : Off
#PC5403/0                     #G  Pctrl communica. : Off
#PC5410/0                     #G  Pctrl enhanced   : Off
#PC5407/0                     #G  RFID-Task        : Off
#PC5406/0                     #G  RFID-Reader      : Off
#PC5131/1                     #G  BitimageFileDump : Easyplug select
#G--------------------------------------------------------------------
#G Favorites setup
#G--------------------------------------------------------------------
#PF/
{
 "Favorites" :
 {
  "MinRoleID" : 3,
  "ParameterIDs" :
  [
   1035
  ]
 }
}
#G
#G--------------------------------------------------------------------
#G Execute system restart  (  309 parameters )
#G--------------------------------------------------------------------
#PC999999/-1#G
```

Related tasks

Save all machine settings on page 148
Apply machine settings on page 150
Selecting Files from an External Memory Medium on page 134

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 27: Key combinations.

Role	Key code	Rights
Operator	1-1-3-2	• *Parameter menu*: Access is limited to the Info menu • *Web panel*: Access to parts of the production and machine settings view • *Ftp access* to machine memory: read-only
Supervisor	2-2-3-1-2-2	• *Parameter menu*: Access to all parameters except service parameters • *Web panel*: Access to the production view, parts of the machine settings view and the administration view • *Ftp access* to machine memory: Read and write access rights
Service	1-2-3-1-2-2-2	• *Parameter menu*: Access to all parameters • *Web panel*: Full access to production, machine setting and administration views • *Ftp access* to machine memory: Read and write access rights

Table 28: Permitted roles, their key codes and the associated rights.

Key code	Purpose
4-2-1-2	Clear parameters
2-1-2-4	Clear key codes (“passwords”)
1-2-4-2	Assigning board address

Table 29: Key codes for clearing settings.

Related tasks

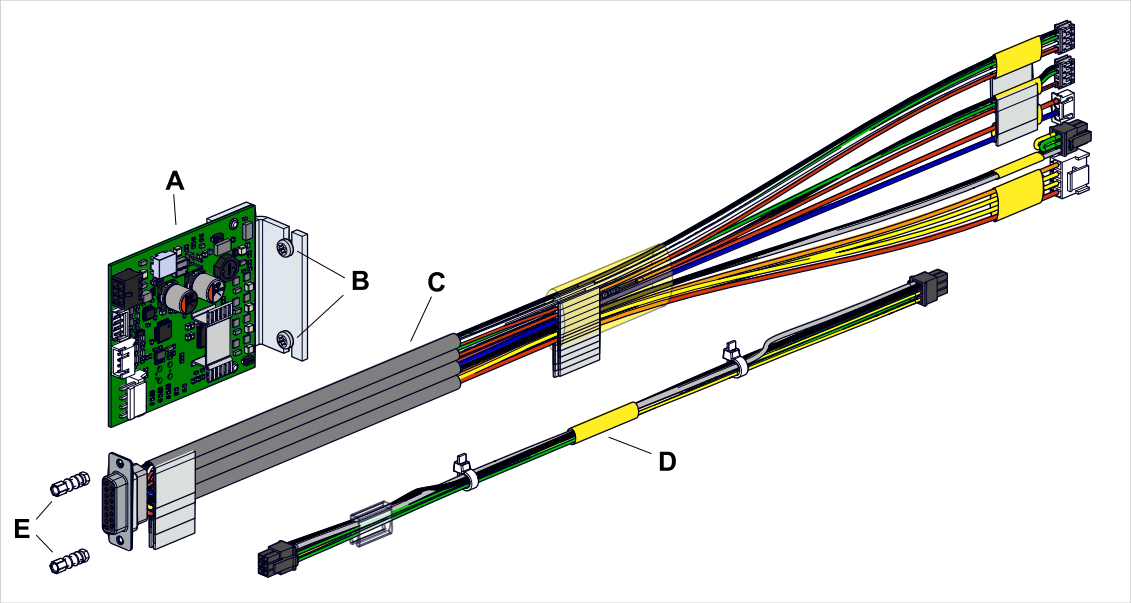
Clear parameters on page 151
Reset key codes on page 152
Machine start without motion control on page 153
Activate Service Mode on page 157

RETROFITTING FROM “BASIC” TO “PERIPHERAL”

Before you begin

Prerequisites:

- XLP 60x “Basic”
- Retrofitting kit N103876:



Pos	Article	Article no.
A	Stepper motor output stage with mounting screws	N101379
B	Screws	A4588 (2x)
C	Peripheral harness with mounting bolts	N103098
D	Cable for power supply and CAN bus	N101806
E	Screws kit	96240

Table 30: Parts contained in the kit.

Tools:

- Torx screwdriver Tx20
- Socket spanner SW 5

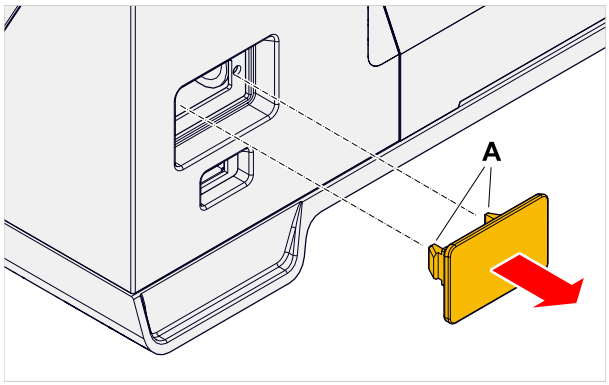
About this task

If a peripheral device (e.g. knife) is to be operated with an XLP 60x “Basic”, a motor output stage (picture above, A) and a cable harness (picture above, B) must be retrofitted to upgrade the printer to the “Peripheral” version.

Procedure

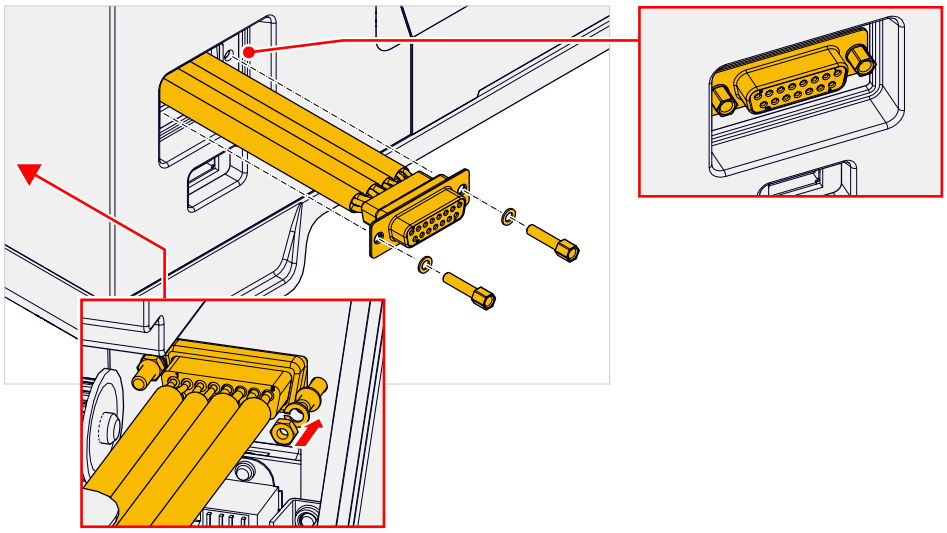
1. Switch off the printer. Disconnect the power cable.

2. Remove the rear hood.
3. Remove the cover of the D-Sub installation opening. To do this, press the two catches (A) together inside the printer and at the same time push the cover outwards.



Installing the cable harness:

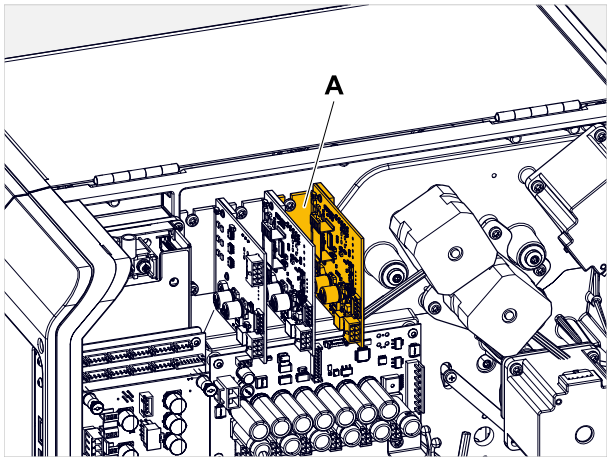
4. Guide the cable harness through the D-Sub installation opening.
5. Tighten the D-sub socket with 2 hexagonal bolts. Sequence on the inside: housing - washer - lock washer - nut.



Installing the output stage board

6. Screw the output stage board to the printer base with 2 screws (A) as shown.

> Depending on the equipment of the printer, 1-3 mounting places for output stage boards are free.



Connecting:

7. Connect the output stage and peripheral cable harness according to the wiring diagram (see link below).
8. Secure all cables so that they do not touch any moving parts.
9. Reattach the rear hood.

Related tasks

Rear hood replacement on page 233

Related reference

Wiring Diagram on page 220

CONNECTION FOR PERIPHERAL DEVICES

This interface is only available on the XLP 60x “Peripheral”.

> CAUTION!
> Connecting non-original devices to this interface can damage the printer. In the worst case the printer can start to burn.
> ► Only connect original Novexx Solutions peripheral devices to this interface.

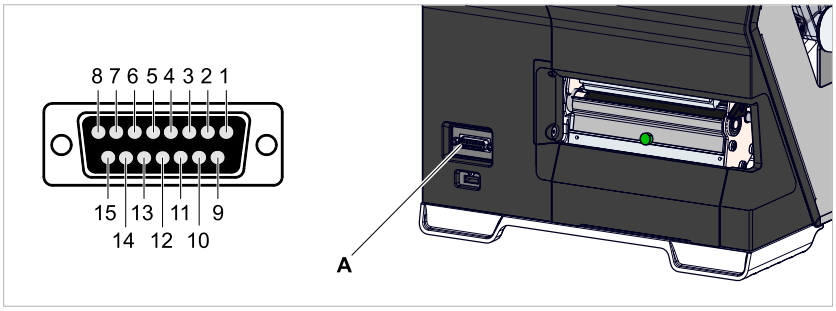


Fig. 67: D-Sub15 connector(A) for peripheral devices on the XLP 60x “Peripheral”.

Pin	Assignment
1	Emitter 2 (GND)
2	Collector 2 (sensor input signal)
3	Collector 1 (sensor input signal)
4	Emitter 1 (GND)
5	+5 V (supply voltage)
6	+45 V (supply voltage)
7	Motor A (motor voltage)
8	Motor /A (motor voltage)
9	LED cathode 2 (light barrier)
10	LED anode 2 (light barrier)
11	LED anode 1 (light barrier)
12	GND (supply voltage)
13	GND (supply voltage)
14	Motor B (motor voltage)
15	Motor /B (motor voltage)

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.

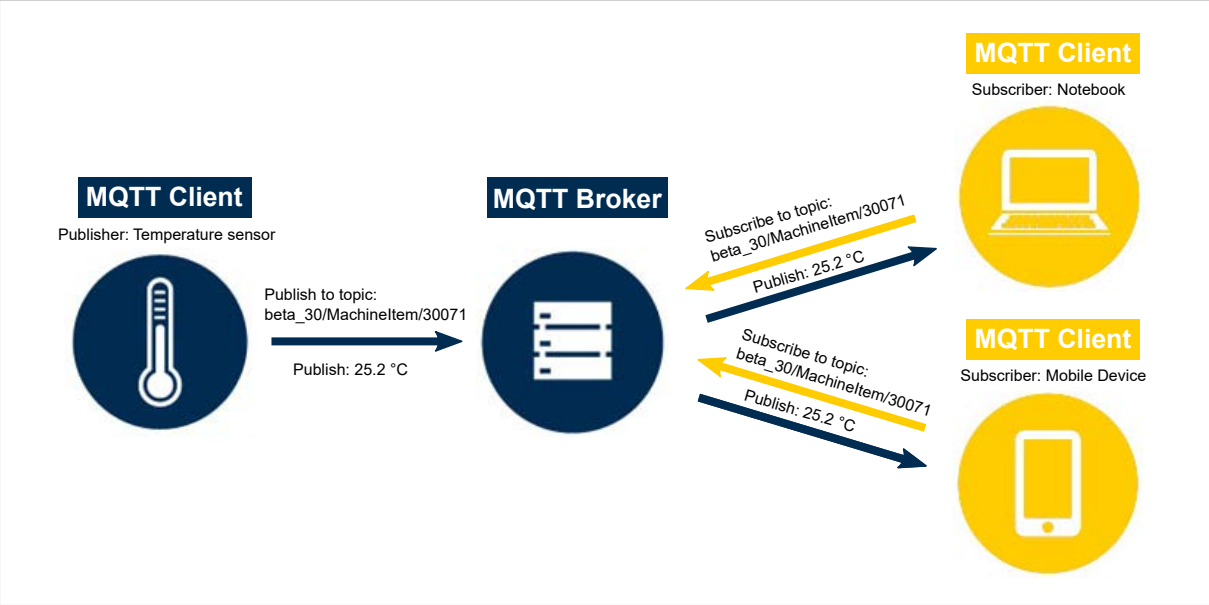


Fig. 68: The MQTT broker transmits the data (topics) to the client.

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 clowing 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 '+/Ma▶
chineItem/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

Index of parameter names and error messages

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