

# Operator's Manual



**Print Module**

**PX**

Made in Germany

Family	Type
Print Module PX	PX4L
	PX4R
	PX4.3L
	PX4.3R
	PX6L
	PX6R

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## 1.1 Instructions

Important information and instructions in this documentation are designated as follows:



### Danger!

Draws your attention to an exceptionally grave, impending danger to your health or life.



### Warning!

Indicates a hazardous situation that could lead to injuries or material damage.



### Attention!

Draws attention to possible dangers, material damage or loss of quality.



### Notice!

Gives you tips. They make a working sequence easier or draw attention to important working processes.



### Environment!

Gives you tips on protecting the environment.



Handling instruction



Reference to section, position, illustration number or document.



Option (accessories, peripheral equipment, special fittings).

Time Information in the display.

## 1.2 Intended Use

- The device is manufactured in accordance with the current technological status and the recognized safety rules. However, danger to the life and limb of the user or third parties and/or damage to the device and other tangible assets can arise during use.
- The device may only be used for its intended purpose and if it is in perfect working order, and it must be used with regard to safety and dangers as stated in the operating manual.
- The print module is designed for the integration into a production line. It is intended exclusively for printing suitable materials that have been approved by the manufacturer. Any other use or use going beyond this shall be regarded as improper use. The manufacturer/supplier shall not be liable for damage resulting from unauthorized use; the user shall bear the risk alone.
- Usage for the intended purpose also includes complying with the operating manual, including the manufacturer's maintenance recommendations and specifications.



### Notice!

The complete documentation is included in the scope of delivery on DVD, and can also currently be found in the Internet.

## 1.3 Safety Instructions

- The device is configured for voltages of 100 to 240 V AC. It only has to be plugged into a grounded socket.
- Only connect the device to other devices which have a protective low voltage.
- Switch off all affected devices (computer, print module, accessories) before connecting or disconnecting.
- The device may only be used in a dry environment, do not expose it to moisture (sprays of water, mists, etc.).
- Do not use the device in an explosive atmosphere.
- Do not use the device close to high-voltage power lines.
- If the device is operated with the cover open, ensure that people's clothing, hair, jewelry etc. do not come into contact with the exposed rotating parts.
- The device or parts of it, especially the printhead can become hot while printing. Do not touch during operation, and allow to cool down before changing material and before disassembly.
- Risk of crushing when closing the cover. Touch the cover at the outside only. Do not reach into the swivel range of the cover.
- Perform only those actions described in this operating manual.  
Work going beyond this may only be performed by trained personnel or service technicians.

## 1 Introduction

- Unauthorized interference with electronic modules or their software can cause malfunctions.
- Other unauthorized work on or modifications to the device can also endanger operational safety.
- Always have service work done in a qualified workshop, where the personnel have the technical knowledge and tools required to do the necessary work.
- There are various warning stickers on the device. They draw your attention to dangers. Warning stickers must therefore not be removed, as then you and other people cannot be aware of dangers and may be injured.
- The maximum sound pressure level  $L_{pA}$  is less than 70 dB(A).



### Danger!

Danger to life and limb from power supply.

- ▶ Do not open the device casing.



### 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.

## 1.4 Safety Marking

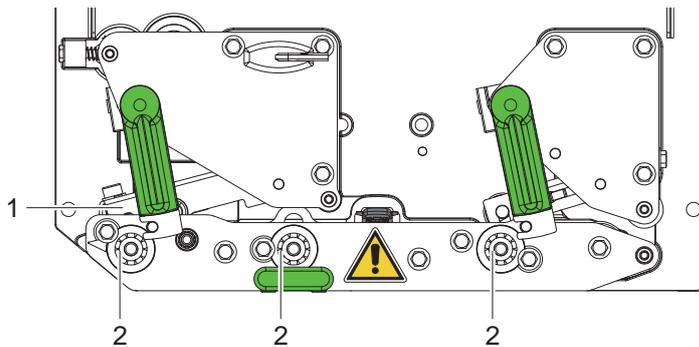


Fig. 1 Safety marking



### Danger spot !

- Risk of burning on the hot printhead assembly (1).
  - ▶ Do not touch the printhead during operation, and allow to cool down before changing material and before disassembly.
- Entanglement hazard by turning rollers (2).
  - ▶ Ensure that people's clothing, hair, jewelry etc. do not come into contact with the exposed rotating parts.

## 1.5 Environment



Obsolete devices contain valuable recyclable materials that should be sent for recycling.

- ▶ Send to suitable collection points, separately from residual waste.

The modular construction of the print module enables it to be easily disassembled into its component parts.

- ▶ Send the parts for recycling.



The electronic circuit board of the device is equipped with a lithium battery.

- ▶ Take old batteries to collection boxes in shops or public waste disposal centers.

## 2.1 Device Overview

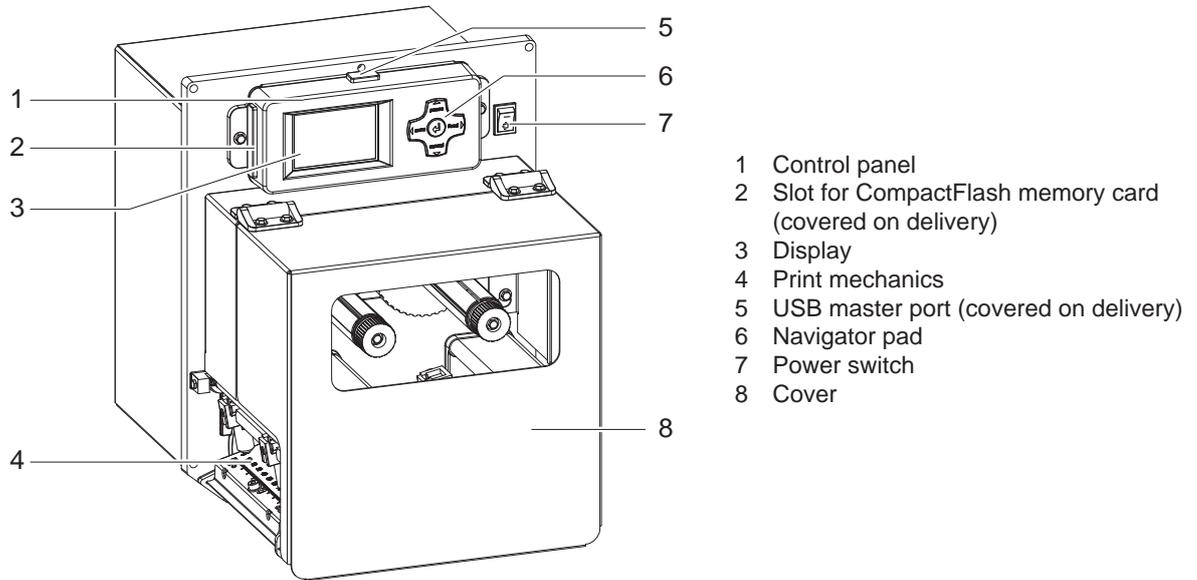


Fig. 2 Overview

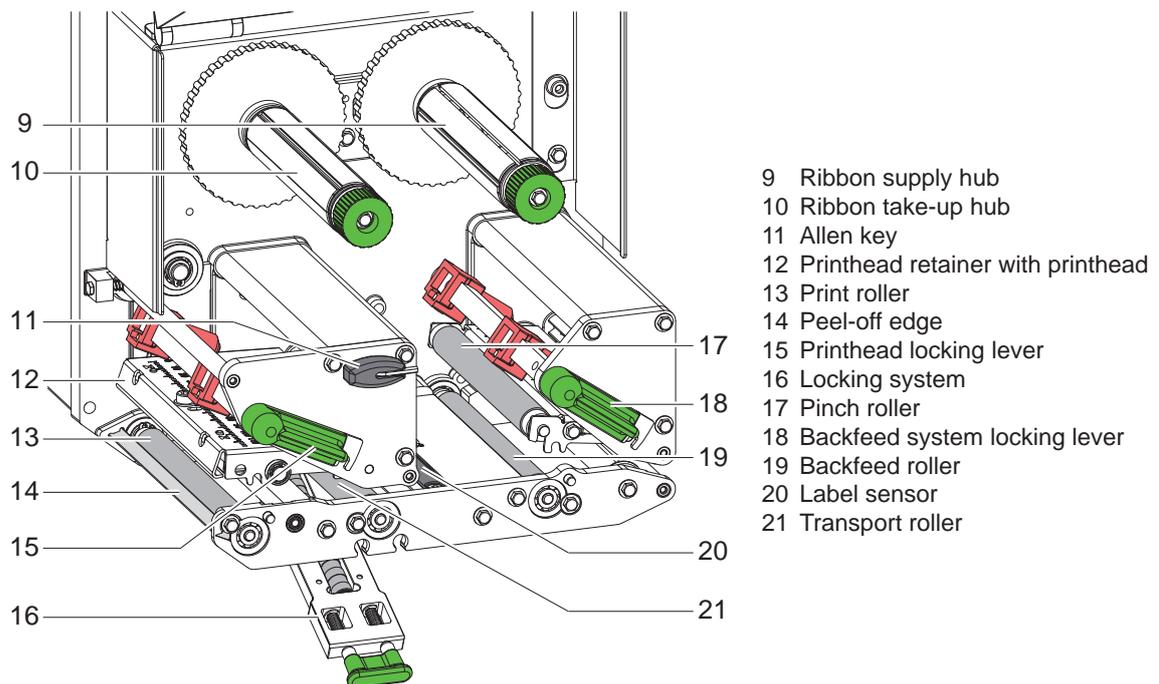
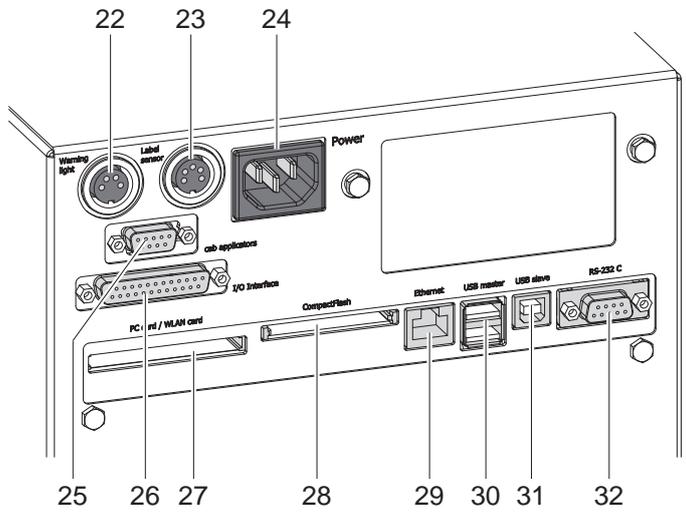
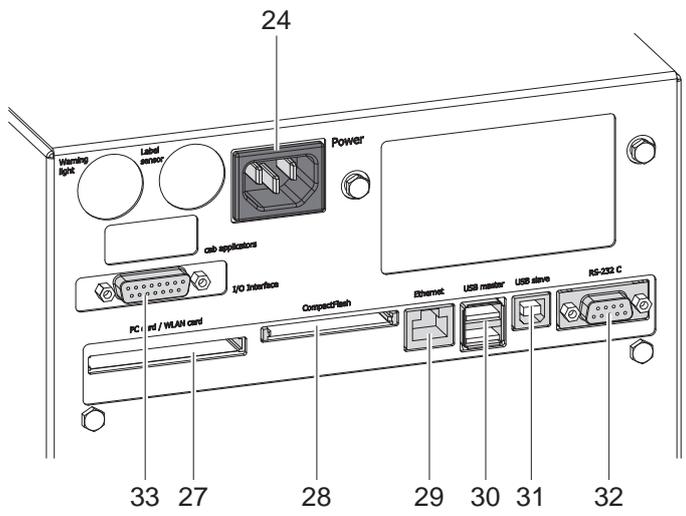


Fig. 3 Print mechanics



- 22 Connector warning light
- 23 Connector warning sensor labels
- 24 Power connection jack
- 25 Interface for cab applicators
- 26 I/O interface
- 27 Slot for PC Card Type II or WLAN card
- 28 Slot for CompactFlash memory card
- 29 Ethernet 10/100 Base-T
- 30 2 USB master ports for keyboard, scanner or service key
- 31 USB high-speed slave port
- 32 Serial RS-232 C port

Fig. 4 Connections - Version with cab-I/O interface



- 24 Power connection jack
- 27 Slot for PC Card Type II or WLAN card
- 28 Slot for CompactFlash memory card
- 29 Ethernet 10/100 Base-T
- 30 2 USB master ports for keyboard, scanner or service key
- 31 USB high-speed slave port
- 32 Serial RS-232 C port
- 33 OEM-I/O interface

Fig. 5 Connections - Version with OEM-I/O interface

## 2.2 Unpacking and Setting-up the Print Module

- ▶ Lift the print module out of the box.
- ▶ Check print module for damage which may have occurred during transport.
- ▶ Check delivery for completeness.
- ▶ Attach the print module to the prepared construction using four screws M5x20 (Mounting dimensions ▷ 9 on page 25).
- ▶ Remove foam transportation safeguards at the printhead and the backfeed system.

Contents of delivery:

- Print module
- 4 Screws M5x20
- Power cable
- USB cable
- Operator's Manual
- DVD with label software, Windows driver and documentation



### Notice!

Please keep the original packaging in case the print module must be returned.



### Attention!

The device and printing materials will be damaged by moisture and wetness.

- ▶ Set up print modules only in dry locations protected from splash water.

## 2.3 Connecting the Device

The standard available interfaces and connectors are shown in figures 4 and 5.

### 2.3.1 Connecting to the Power Supply

The print module is equipped with a wide area power unit. The device can be operated with a supply voltage of 230 V~/50 Hz or 115 V~/60 Hz without adjustment.

1. Check that the device is switched off.
2. Plug the power cable into the power connection socket (24 / fig. 4/5).
3. Plug the power cable into a grounded socket.

### 2.3.2 Connecting to a Computer or Computer Network



### Attention!

Inadequate or no grounding can cause malfunctions during operations.

Ensure that all computers and cables connected to the print module are grounded.

- ▶ Connect the print module to a computer or network by a suitable cable.

For details of the I/O interface ▷ Interface Description.

For details of the configuration of the other interfaces ▷ Configuration Manual.

## 2.4 Switching on the Device

When all connections have been made:

- ▶ Switch the print module on at the power switch (7 / fig. 2).  
The print module performs a system test, and then shows the system status *Ready* in the display.

If an error occurs during the system test, the symbol  and type of error are displayed.

### 3.1 Structure of the Control Panel

The user can control the operation of the print module with the control panel, for example:

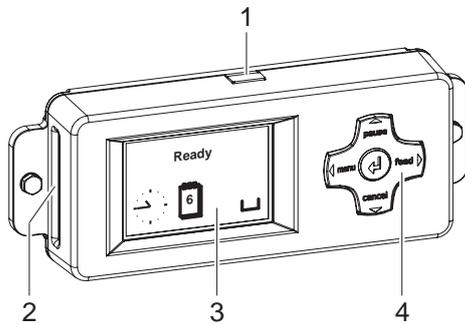
- Issuing, interrupting, continuing and canceling print jobs,
- Setting printing parameters, e.g. heat level of the printhead, print speed, interface configuration, language and time of day (▷ Configuration Manual),
- Start the test functions (▷ Configuration Manual),
- Control stand-alone operation with a memory module (▷ Configuration Manual),
- Update the firmware (▷ Configuration Manual).

Many functions and settings can also be controlled by software applications or by direct programming with a computer using the print module's own commands. ▷ Programming Manual for details.

Settings made on the control panel make the basic settings of the print module.



**Notice!**  
It is advantageous, whenever possible, to make adaptations to various print jobs in the software.



The control panel contains a graphic display (3) and the navigator pad (4) with five integrated keys.

The graphic display indicates the current status of the print module and the print job, indicates faults and shows the settings in the menu.

Additionally the control panel has a USB master port (1) with the same functionality like the ports (30 / fig. 4/5) at the back side of the print module as well as a slot (2) for a CompactFlash memory card. USB port (1) and slot (2) are covered with caps.

▶ Remove the caps if necessary.

Fig. 6 Control Panel



**Notice!**  
A CF memory card in the control panel has to be used as "Ext. CompactFlash (CFEXT)", a memory card in the slot (28 / fig. 4/5) at the back side of the print module as "CompactFlash (CF)". ▷ Configuration Manual.

### 3.2 Symbol Displays

The symbols shown in the following table may appear in the status line of the display. They enable the current status to be seen quickly. The table contains the most important symbols.

For the configuration of the status line ▷ the Configuration Manual.

Symbol	Description	Symbol	Description	Symbol	Description
	Clock		Ribbon supply		Temperature of the printhead
	Date sheet		Wi-Fi signal strength		Access to memory card
	Date/time digital		Ethernet link status		Print module is receiving data

Table 1 Symbol displays

## 3.3 Operating States

State	Display	Description
<b>Ready</b>	Ready and configured symbol displays, such as time  and date 	The print module is in the ready state and can receive data.
<b>Printing label</b>	Printing label and the number of the printed label in the print job.	The print module is currently processing an active print job. Data can be transmitted for a new print job. The new print job will start when the previous one has finished.
<b>Pause</b>	Pause and the symbol 	The printing process has been interrupted by the operator. The print process may be continued by pressing the <b>pause</b> key.  The printing process has been interrupted automatically by passing a pre-defined rest diameter of the ribbon supply roll. After loading a new ribbon roll the print process may be continued by pressing the <b>pause</b> key.
<b>Correctable error</b>	 and the type of error and the number of labels still to be printed.	An error has occurred that can be rectified by the operator without interrupting the print job. The print job can be continued after the error has been rectified.
<b>Irrecoverable error</b>	 and the type of error and the number of labels still to be printed.	An error has occurred that cannot be rectified without interrupting the print job.
<b>Critical error</b>	 and the type of error	An error occurs during the system test. ► Switch the print module off and then on again at the power switch or ► Press <b>cancel</b> key. Call Service if the fault occurs persistently.
<b>Power Save Mode</b>	 and the key lighting is switched off	If the print module is not used for a lengthy period, it automatically switches to power save mode. ► To exit power save mode: Press any key on the navigator pad.

Table 2 Operating states

3.4 Key Functions

The key functions depend on the current operating state:

- Active functions: Labels and symbols on the navigator pad keys light up.
- Active functions light up white in print mode (e. g. **menu** or **feed**).
- Active functions light up orange in the offline menu (arrows, key ↩).

Key	Display	State	Function
<b>menu</b>	lights	Ready	<b>Ready</b> To the offline menu
<b>feed</b>	lights	Ready	<b>Ready</b> Feeds a blank label
<b>pause</b>	lights	Ready	<b>Ready</b> After the end of a print job, reprint the last label
		Printing label	<b>Printing label</b> Interrupt print job, print module goes into "Pause" state
		Pause	<b>Pause</b> Continue the print job, print module goes into "Printing label" state
	flashes		<b>Correctable error</b> Continue the print job after rectifying the error, print module goes into "Printing label" state
<b>cancel</b>	lights	Ready	<b>Ready</b> Delete internal memory, the last label can no longer be reprinted.
		Printing label	<b>Printing label</b> Short press → cancels the current print job
		Pause	<b>Pause</b> Longer press → cancels the current print job and deletes all print jobs
	flashes		<b>Correctable error</b>
			<b>Irrecoverable error</b>
↩	lights		<b>Error</b> Call Help - Concise information for rectifying the fault will be displayed

Table 3 Key functions in the print mode

Key	Menu	Parameter setting	
		Parameter choice	Numeric value
↑	Return from a submenu	-	Increase of the number at the cursor position
↓	Jump into a submenu	-	Decrease of the number at the cursor position
←	Menu option to the left	Sheets to the left	Cursor shift to the left
→	Menu option to the right	Sheets to the right	Cursor shift to the right
↩	Start of a selected menu option	Confirmation of the selected value	
	Pressing 2 s: Leaving the offline menu	Pressing 2 s: Abort without changing the value	

Table 4 Key functions in the offline menu

**Notice!**

For adjustments and simple installation work, use the accompanying Allen key located in the upper section of the print unit. No other tools are required for the work described here.

### 4.1 Loading Labels

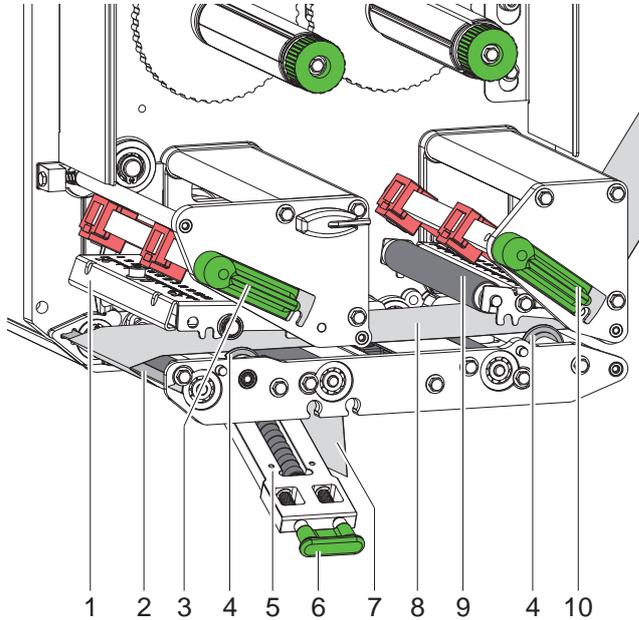


Fig. 7 Loading labels

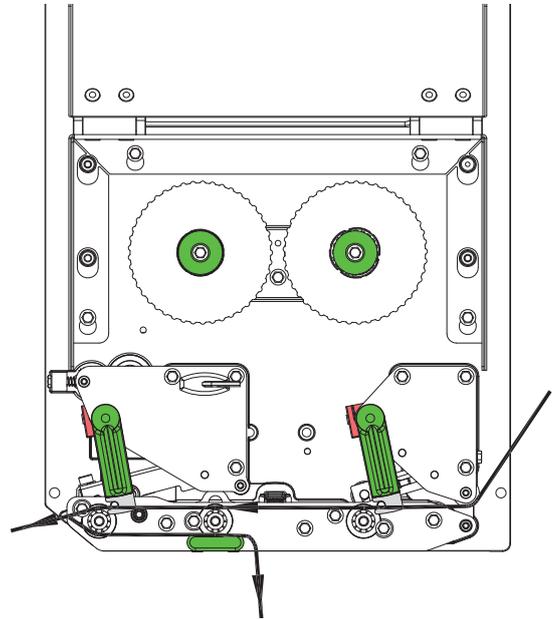


Fig. 8 Label feed path

1. Open cover.
2. Turn levers (3, 10) counterclockwise to open the printhead (1) and the backfeed system (9).
3. Move guide rings (4) outwards until the media can pass between the rings and the mounting plate.
4. Guide label strip (8) to the peel-off edge (2) as shown in the figure 8 and move to the mounting plate until it stops. The printing side of the label must be shown from above.
5. For peel-off mode forward the label strip over the peel-off edge, that the strip reaches back to the locking system (5). Remove the labels from the overhanging strip.
6. Turn levers (3, 10) clockwise to close the printhead (1) and the backfeed system (9).
7. Slide guide rings (4) against the label strip.

**Notice!**

**For a good label tracking it is necessary to brake slightly (about 3 N) the incoming material. This must be done outside of the print module.**

8. For peel-off mode pull the knob (6) and swing downward the locking system (5). Guide the liner (7) from the peel-off edge (2) over the locking system (5). Tighten the liner, pull the knob (6) and swing the locking system upwards. Ensure that the knob snaps in completely into the side plate.
9. Close cover.

### 4.2 Setting the Label Sensor

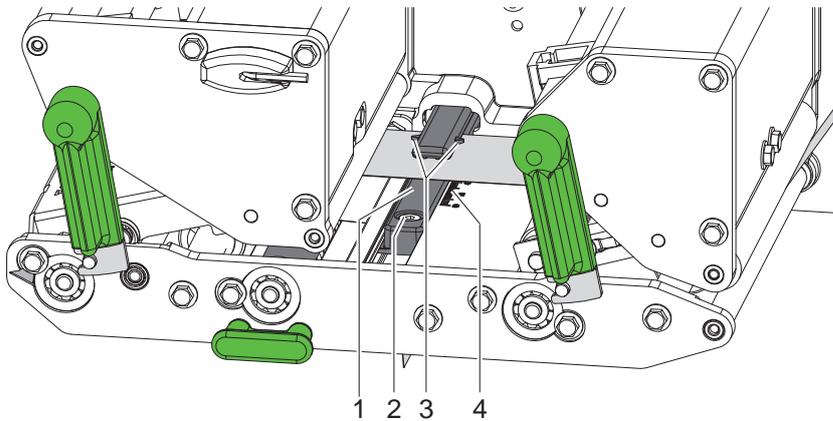


Fig. 9 Setting the label sensor

The label sensor (1) can be shifted perpendicular to the direction of media flow for adaptation to the media. The sensor unit is marked with indentation (3) on the label sensor retainer.

- ▶ Loosen screw (2) slightly.
- ▶ Position label sensor by moving it in such a way that the sensor can detect the label gap or a reflex or cut-out mark.  
- or, if the labels deviate from a rectangular shape, -
- ▶ Align label sensor with the front edge of the label in the direction of paper flow.
- ▶ Tighten screw (2).



**Notice!**

Using the scale (4) the label sensor also can be set before loading the labels.

### 4.3 Setting the Head Locking System

The printhead is pushed on via two plungers. The location of the outer plunger must be set to the width of the label medium used so as to

- achieve even print quality across the entire label width
- prevent wrinkles in the feed path of the transfer ribbon
- prevent premature wearing of the print roller and printhead.

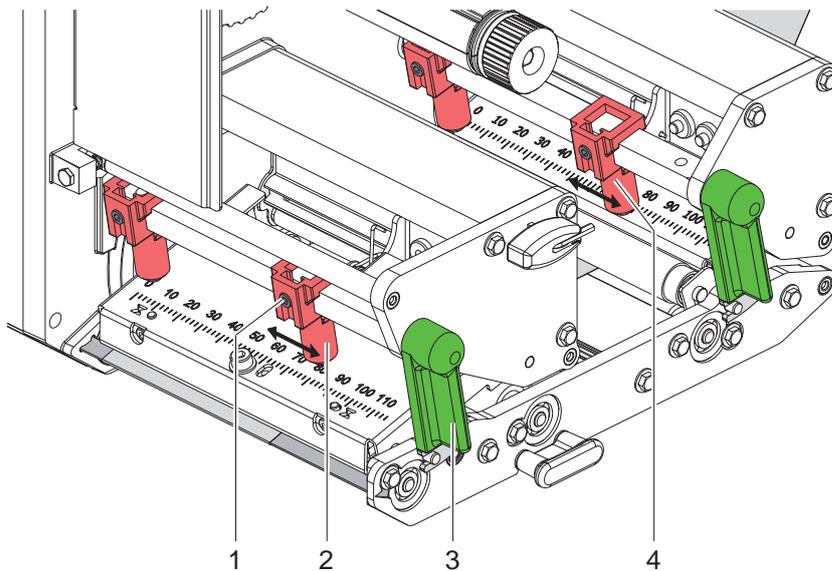


Fig. 10 Setting the head locking system

1. Turn lever (3) clockwise to lock the printhead.
2. Loosen threaded pin (1) at outer plunger (2) with Allen key.
3. Align outer plunger (2) to the outer label edge and tighten threaded pin (1).
4. Position outer plunger (4) at the backfeed system in the same manner.

## 4.4 Loading Transfer Ribbon

**Notice!**

With direct thermal printing, do not load a transfer ribbon; if one has already been loaded, remove it.

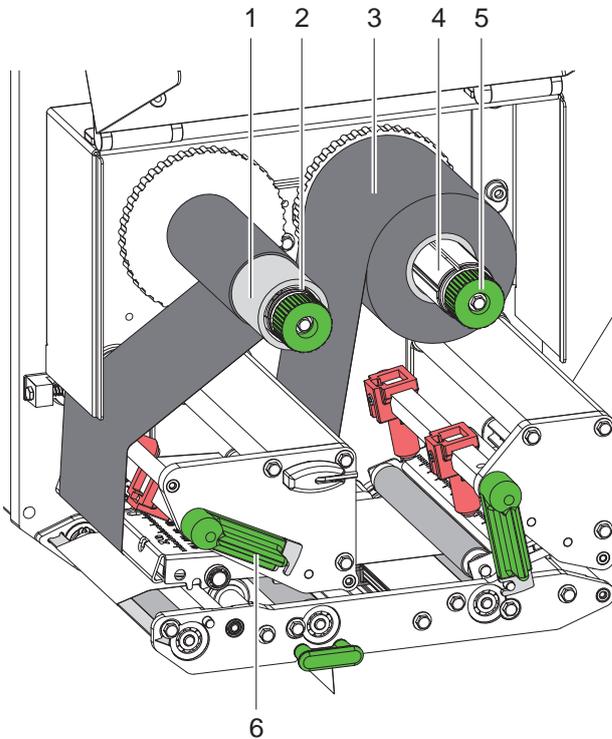


Fig. 11 Loading transfer ribbon

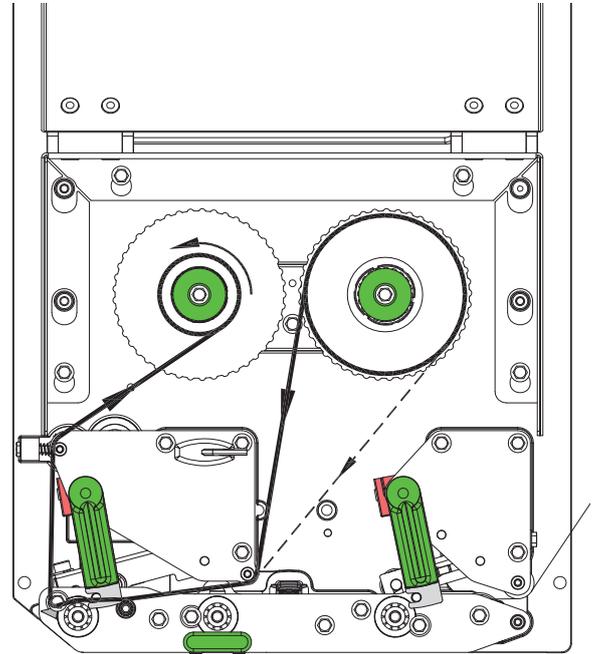


Fig. 12 Transfer ribbon feed path

1. Clean printhead before loading the transfer ribbon (▷ 6.3 on page 18).
2. Turn lever (6) counterclockwise to open the printhead.
3. Slide transfer ribbon roll (3) onto the ribbon supply hub (4) until it stops and so that the color coating of the ribbon faces away from the printhead after loading.
4. Hold ribbon supply hub (4) firmly and turn knob (5) counterclockwise until the transfer ribbon roll is secured.
5. Slide suitable ribbon core (1) onto the transfer ribbon take-up hub (2) and secure it in the same way.
6. Guide transfer ribbon through the print unit as shown in the figure 12.
7. Secure starting end of transfer ribbon to the transfer ribbon core (1) with adhesive tape. Ensure counterclockwise rotation direction of the transfer ribbon take-up hub here.
8. Turn transfer ribbon take-up hub (2) counterclockwise to smooth out the feed path of the transfer ribbon.
9. Turn lever (6) clockwise to close the printhead.

## 4.5 Setting the Feed Path of the Transfer Ribbon

Transfer ribbon wrinkling can lead to print image errors. Transfer ribbon deflection can be adjusted so as to prevent wrinkles.



### Notice!

A maladjustment of the head locking system may also cause ribbon wrinkling

► Check first the setting of the head locking system (▷ 4.3 on page 14).

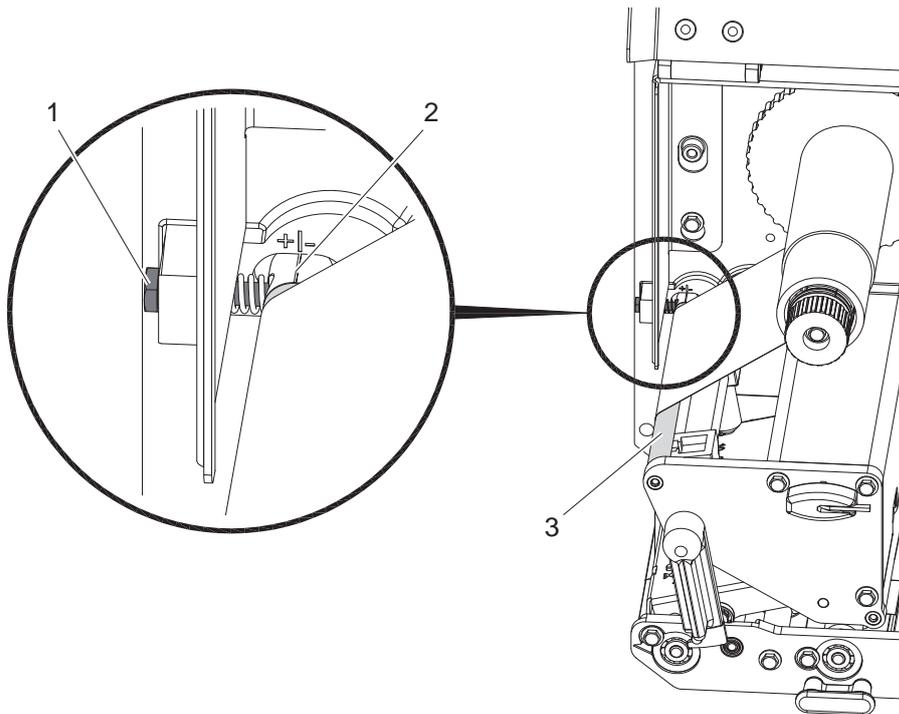


Fig. 13 Setting the feed path of the transfer ribbon



### Notice!

**The adjustment is best carried out during printing.**

1. Read current setting on the scale (2) and record if necessary.
2. Turn screw (1) with Allen key and observe the behavior of the ribbon.  
In the + direction, the inner edge of the transfer ribbon is tightened, and the outer edge is tightened in the - direction.

### 5.1 Printhead Protection



#### Attention!

Printhead damage caused by improper handling!

- ▶ Do not touch the underside of the printhead with the fingers or sharp objects.
- ▶ Ensure that the labels are clean.
- ▶ Print with the lowest possible printhead temperature.

### 5.2 Synchronization of the Paper Feed

After the label stock has been inserted, for peel-off mode a synchronization of the paper feed is required. That way the first label, which is detected by the label sensor, will be transported to the print position and all labels in front will be fed out of the print module. So the synchronization avoids, that blank labels are peeled-off together with the first printed label. This can cause useless first label.

- ▶ Press the **feed** key to start the synchronization.
- ▶ Remove the blank labels peeled-off during the synchronization.



#### Notice!

Synchronization is not necessary if the printhead was not opened between different print jobs, even if the print module was switched off.

### 5.3 Printing



#### Attention!

To start the print operation two steps are necessary :

- ▶ Send a print job via data interface or load a print job from a memory medium.
  - ▷ Programming Manual, Configuration Manual
- ▶ Start a print cycle by sending external signals via I/O interface.
  - ▷ Interface Description

#### 5.3.1 Peel-off Mode

In Peel-off mode, the labels are automatically peeled off the liner after printing and presented for removal.



#### Attention!

- ▶ Activate the peel-off mode in the software.  
This is done with the "P command" in the direct programming, ▷ Programming Manual.

#### 5.3.2 External Rewinding

The printed labels are leaving the print module at the peel-off edge and may be wound up externally with the liner for later use.

#### 5.3.3 Ribbon Saving

If there is no information to print during a longer label feed, the printhead will be lifted, and the transfer ribbon will be paused from feeding. This will reduce the ribbon consumption. The minimum length for ribbon saving is defined in the firmware and depends on the print speed.

The ribbon saver can permanently be activated in the printer configuration (▷ Configuration Manual) or job-oriented by the software (▷ Programming Manual).

## 6.1 Cleaning Information



### **Danger!**

**Risk of death via electric shock!**

- ▶ **Disconnect the print module from the power supply before performing any maintenance work.**

The print module requires very little maintenance.

It is important to clean the thermal printhead regularly. This guarantees a consistently good printed image and plays a major part in preventing premature wear of the printhead.

Otherwise, the maintenance is limited to monthly cleaning of the device.



### **Attention!**

**The print module can be damaged by aggressive cleansers.**

- ▶ **Do not use abrasive cleaners or solvents for cleaning the external surfaces or modules.**

- ▶ Remove dust and paper fluff from the print area with a soft brush or vacuum cleaner.
- ▶ The cover of the print module can be cleaned with a standard cleanser.

## 6.2 Cleaning the Rollers

Accumulations of dirt on the print and transport rollers may impair the media transport and the print quality.

- ▶ Lift the printhead, open the transport systems.
- ▶ Remove labels and transfer ribbon from the print module.
- ▶ Remove deposits with roller cleaner (Part No. 9200051) and a soft cloth.
- ▶ If a roller is badly soiled or appear damaged, replace it ▷ Service Manual.

## 6.3 Cleaning the Printhead

Cleaning intervals:      direct thermal printing      - every media roll change  
    thermal transfer printing      - every ribbon roll change

Substances may accumulate on the printhead during printing and adversely affect printing, e.g. differences in contrast or vertical stripes.



### **Attention!**

**Printhead can be damaged!**

- ▶ **Do not use sharp or hard objects to clean the printhead.**
- ▶ **Do not touch protective glass layer of the printhead with fingers.**



### **Attention!**

**Risk of injury from the hot printhead.**

- ▶ **Ensure that the printhead has cooled down before starting cleaning.**

- ▶ Lift the printhead.
- ▶ Remove labels and transfer ribbon from the printer.
- ▶ Clean printhead surface with a cotton swab dipped in pure alcohol.
- ▶ Allow printhead to dry for 2–3 minutes before commissioning the printer.

## 7.1 Types of Errors

The diagnostic system indicates on the screen if an error has occurred. The print module is set into one of the three possible error states according to the type of error.

State	Display	Key	Remark
Correctable error		pause flashes cancel lights	▷ 3.4 on page 11
Irrecoverable error		cancel flashes	
Critical fault		-	

Table 5 Error states

## 7.2 Problem Solution

Problem	Cause	Remedy
Transfer ribbon creases	Head locking system not adjusted	Adjust the head locking system. ▷ 4.3 on page 14
	Transfer ribbon deflection not adjusted	Adjust the transfer ribbon deflection. ▷ 4.5 on page 16
	Transfer ribbon too wide	Use a transfer ribbon slightly wider than the width of label.
Print image has smears or voids	Printhead is dirty	Clean the printhead ▷ 6.3 on page 18
	Temperature too high	Decrease temperature via software.
	Unsuitable combination of labels and transfer ribbon	Use different type of ribbon.
Print module prints a sequence of characters instead of the label format	Print module is in ASCII dump mode	Cancel the ASCII dump mode.
Print module transports label media, but transfer ribbon does not move	Transfer ribbon incorrectly inserted.	Check and, if necessary, correct the transfer ribbon web and the orientation of the label side.
	Unsuitable combination of labels and transfer ribbon	Use different type of ribbon.
Print module only prints each second label	Setting of the label height in the software is too large.	Change the label height in the software.
Vertical white lines in the print image	Printhead is dirty	Clean the printhead ▷ 6.3 on page 18
	Printhead is defective (failure of heat elements)	Change the printhead. ▷ Service Manual.
Horizontal white lines in the print image	Print module is used with the <code>backfeed &gt; smart</code> in the cut or peel-off mode	Set the <code>backfeed &gt; always</code> in the setup. ▷ Configuration Manual.
Print image is irregular, one side is lighter	Printhead is dirty	Clean the printhead ▷ 6.3 on page 18
	Head locking system not adjusted	Adjust the head locking system. ▷ 4.3 on page 14

Table 6 Problem solution

## 7.3 Error Messages and Fault Correction

Error message	Cause	Remedy
ADC malfunction	Hardware error	Switch the print module off and then on. If error recurs call service.
Barcode error	Invalid barcode content, e.g. alpha-numeric characters in a numerical barcode	Correct the barcode content.
Barcode too big	The barcode is too big for the allocated area of the label	Reduce the size of the barcode or move it.
Battery low	Battery of the PC card is flat	Replace battery in the PC card.
Buffer overflow	The input buffer memory is full and the computer is still transmitting data.	Use data transmission via protocol (preferably RTS/CTS).
Card full	No more data can be stored on the memory card	Replace card.
Device not conn.	Programming addresses a non-existent device	Either connect this device or correct the programming.
File not found	Requested file is not on the card	Check the contents of the card.
Font not found	Error with the selected download font	Cancel current print job, change font.
FPGA malfunction	Hardware error	Switch the print module off and then on. If error recurs call service.
Head error	Hardware error	Switch the print module off and then on. If error recurs replace printhead.
Head open	Printhead not locked	Lock printhead.
Head too hot	Printhead is overheated	After pausing the print job will be continued automatically. If the fault recurs repeatedly, reduce the heat level or the print speed via software.
Invalid setup	Error in the configuration memory	Re-configure print module. If error recurs call service.
Memory overflow	Current print job contains too much information, e.g. selected font, large graphics	Cancel current print job. Reduce amount of data to be printed.
Name exists	Duplicate usage of field name in the direct programming	Correct programming
No DHCP server	The print module is configured for DHCP, but there is no DHCP server, or the DHCP server is not currently available.	Switch off DHCP in the configuration, and assign a fixed IP address. Please contact your network administrator.
No label found	There are labels missing on the label material	Press <b>pause</b> key repeatedly until print module recognizes the next label on the material.
	The label format as set in the software does not correspond with the real label format	Cancel current print job. Change the label format set in the software. Restart print job.
No label size	The size of the label is not defined in the programming.	Check programming.
No Link	No network link	Check network cable and connector. Please contact your network administrator.
		For operation without network connection set parameter "Network error" to <code>Off</code> ▷ Configuration Manual.
No record found	Refers to the optional memory card; database access error	Check programming and card contents.
No SMTP server	The print module is configured for SMTP, but there is no SMTP server, or the SMTP server is not currently available.	Switch off SMTP in the configuration. <b>Caution!</b> Then a warning cannot be sent by e-mail (EAlert). Please contact your network administrator.

Error message	Cause	Remedy
No Timeserver	Timeserver is selected in the configuration, but there is no Timeserver, or the Timeserver is not currently available.	Switch off Timeserver in the configuration. Please contact your network administrator.
Out of paper	Out of label roll	Load labels.
	Error in the paper feed	Check paper feed.
Out of ribbon	Out of transfer ribbon	Insert new transfer ribbon.
	Transfer ribbon melted during printing	Cancel current print job. Change the heat level via software. Clean the printhead ▷ 6.3 on page 18 Load transfer ribbon Restart print job.
	The print module is loaded with thermal labels, but the software is set to transfer printing	Cancel current print job. Set software to direct thermal printing. Restart print job
Protocol error	Print module has received an unknown or invalid command from the computer.	Press the <b>pause</b> key to skip the command or press the <b>cancel</b> key to cancel the print job.
Read error	Read error when reading from the memory card	Check data of the card. Backup data, reformat card.
Remove ribbon	Transfer ribbon is loaded although the print module is set to direct thermal printing	for direct thermal printing remove ribbon for thermal transfer printing set the print module in the configuration or in the software to transfer printing
Ribbon sv. malf.	Hardware error	Switch the print module off and then on. If error recurs call service.
Structural err.	Error in the file list of the memory card, data access is uncertain.	Format memory card.
Unknown card	Card not formatted, Type of card not supported	Format card, use different type of card.
USB error Device stalled	A USB device has been detected, but it is not working.	Do not use the USB device.
USB error Too much current	The USB device consumes too much current.	Do not use the USB device.
USB error Unknown device	Failure to detect USB device	Do not use the USB device.
Voltage error	Hardware error	Switch the print module off and then on. If error recurs call service. It is shown which voltage has failed. Please note.
Write error	Hardware error	Repeat the write process, reformat card.
Write protected	PC card write protection is activated.	Deactivate the write protection.
Wrong revision	Error when updating the firmware. Firmware not compatible with the hardware version	Load the compatible firmware.

Table 7 Error Messages and Fault Correction

## 8.1 Label Dimensions

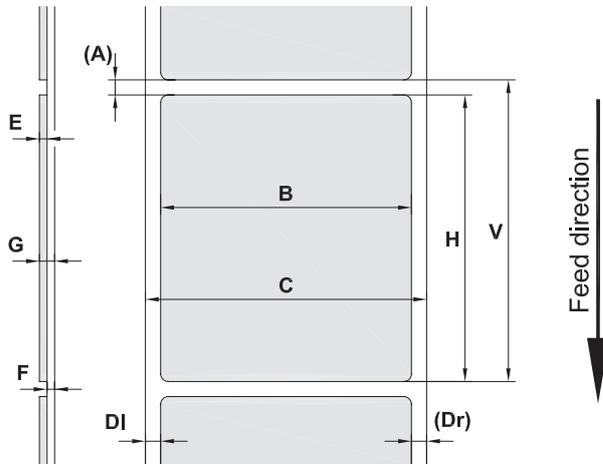


Fig. 14 Label dimensions

Dim.	Designation	Dim. in mm									
		PX4			PX4.3		PX6				
		dpi		203	300	600	203	300	203	300	
B	Label width	10 - 116						50 - 174			
H	Label height	min. without backfeed		6				12			
		min. in peel-off mode		12				25			
		max.		5000	4000	1000	5000	4000	4000	3000	
A	Label distance	> 2									
C	Width of liner	25 - 118						50 - 178			
DI	Left margin	≥ 0									
Dr	Right margin	≥ 0									
E	Label thickness	0,025 - 0,25									
F	Liner thickness	0,03 - 0,1									
G	Thickness label with liner	0,055 - 0,35									
V	Label feed	> 8						>14			

- Small label sizes, thin materials or strong glue can lead to limitations. Critical applications need to be tested and cleared.

Table 8 Label dimensions

8.2 Device Dimensions

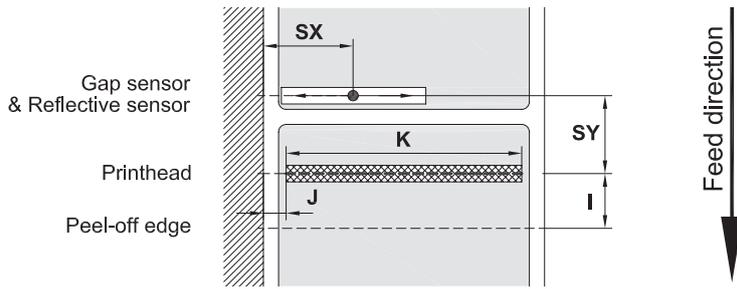


Fig. 15 Device dimensions

Dim.	Designation	Dim. in mm							
		PX4			PX4.3		PX6		dpi
		203	300	600	203	300	203	300	
I	Distance printhead - peel-off edge	14,4							
J	Distance 1st heating point - material edge	L	2,0	2,0	2,0	2,0	2,0	0,4	3,1
		R	3,8	2,0	2,1	3,7	-0,7	0,4	3,1
K	Print width	L	104,0	105,7	105,6	104,0	108,4	168,0	162,6
		R	104,0	105,7	105,6	104,0	107,7	168,0	162,6
SX	Distance gap/reflective sensor - material edge, i.e. permissible distance of reflex or cut-out marks to the material edge	4 - 60							
SY	Distance gap/reflective sensor - printhead	94,5							

Table 9 Device dimensions

8.3 Reflex Mark Dimensions

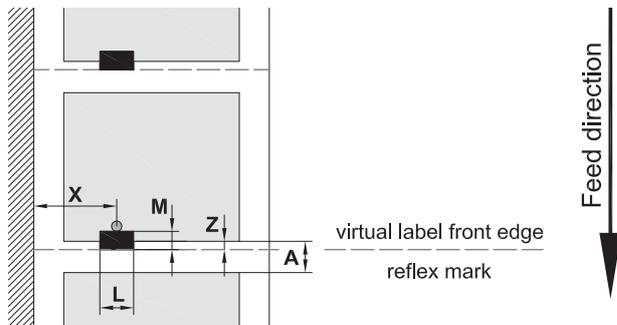
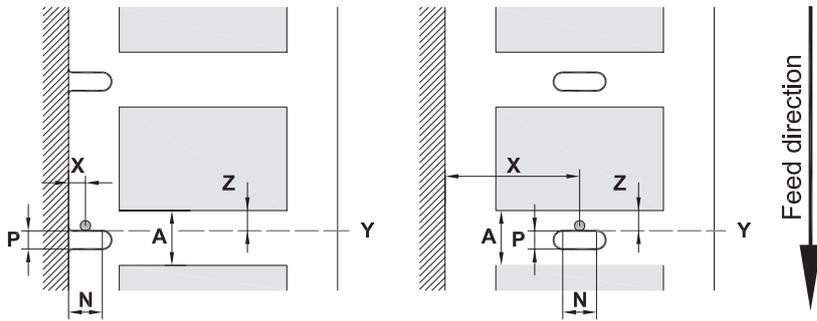


Fig. 16 Reflex mark dimensions

Dim.	Designation	Dim. in mm
A	Label distance	> 2
L	Width of reflex mark	> 5
M	Height of reflex mark	3 - 10
X	Distance mark - material edge	4 - 60
Z	Distance virtual label front edge - actual label front edge ▶ Adjust software settings	0 up to A / recomm. : 0
<ul style="list-style-type: none"> <li>Reflex marks must be on the back side of the material (liner).</li> <li>Label sensor for reflex marks on the top side on request.</li> <li>Specification is valid for black marks.</li> <li>Recognition of colored marks may fail. ▶ Preliminary tests are needed.</li> </ul>		

Table 10 Reflex mark dimensions

### 8.4 Cut-out Mark Dimensions



for marginal cut-out marks  
 minimum liner thickness 0,06 mm

Fig. 17 Cut-out mark dimensions

Dim.	Designation	Dim. in mm
A	Label distance	> 2
N	Width of cut-out mark for marginal cut-out	> 5 > 8
P	Height of cut-out mark	2 - 10
X	Distance mark - material edge	4 - 60
Y	Sensor recognized virtual label front edge with gap sensor recognition	Rear edge cut-out
Z	Distance recognized front edge - actual label front edge ▶ Adjust software settings	0 up to A-P

Table 11 Cut-out mark dimensions

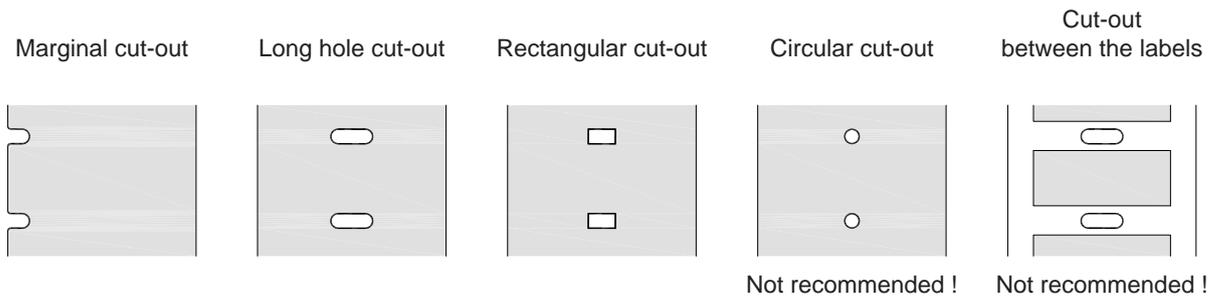


Fig. 18 Samples for cut-out marks

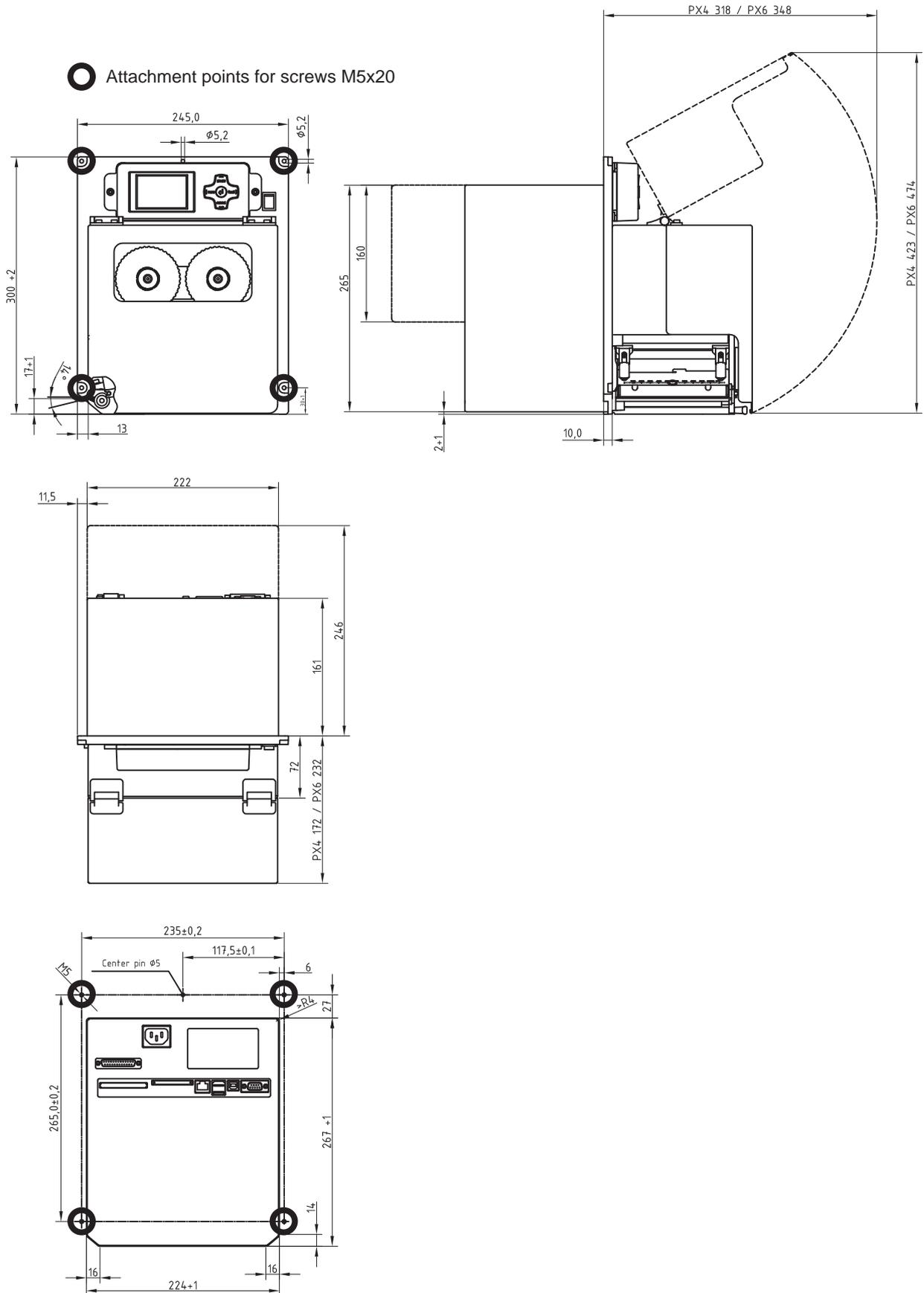


Fig. 19 Mounting Dimensions

## 10.1 Declaration of Incorporation



cab Produkttechnik  
GmbH & Co KG  
Wilhelm-Schickard-Str. 14  
D-76131 Karlsruhe  
Germany

### Declaration of Incorporation

We declare herewith that the following „partly completed machinery“ as a result of design, construction and the version put in circulation complies with the essential requirements of the **Directive 2006/42/EC on machinery** :

Annex I, Article 1.1.2, 1.1.3, 1.1.5, 1.1.6, 1.2.1, 1.2.4.1, 1.3.2, 1.5.1, 1.5.2, 1.5.8, 1.6.3, 1.7

In the event of any alteration which has not been approved by us being made to any device as designated below, this statement shall thereby be made invalid.

Device:	<b>Print Module</b>
Type:	<b>PX</b>
Applied EC Regulations and Norms:	
<b>Directive 2006/42/EC on machinery</b>	<ul style="list-style-type: none"> <li>• EN ISO 12100:2010</li> <li>• EN ISO 13857:2008</li> <li>• EN 349:1993+A1:2008</li> <li>• EN ISO 13849-1:2015</li> <li>• EN 60950-1:2006 +A11:2009+A12:2011+A1:2010+A2:2013</li> </ul>
Person authorised to compile the technical file :	<b>Erwin Fascher Am Unterwege 18/20 99610 Sömmerda</b>
Signed for, and on behalf of the Manufacturer :	<b>Sömmerda, 05.10.2016</b>
<b>cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda</b>	 <b>Erwin Fascher Managing Director</b>

Start-up is forbidden until determined that the machine, into which the incomplete machine is to be built corresponds to the regulations of the machine directive.

The documents according annex VII part B from the incomplete machinery are created and will commit to state agencies on request in electronic kinds.

10.2 EU Declaration of Conformity



cab Produkttechnik  
 GmbH & Co KG  
 Wilhelm-Schickard-Str. 14  
 D-76131 Karlsruhe  
 Germany

**EU Declaration of Conformity**

We declare herewith that as a result of the manner in which the device designated below was designed, the type of construction and the devices which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EU Rules for Safety and Health. In the event of any alteration which has not been approved by us being made to any device as designated below, this statement shall thereby be made invalid.

Device:	<b>Print Module</b>
Type:	<b>PX</b>
Applied EU Regulations and Norms:	
<b>Directive 2014/30/EU relating to electromagnetic compatibility</b>	<ul style="list-style-type: none"> <li>• EN 55024:2010</li> <li>• EN 61000-6-2:2005</li> </ul>
<b>Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment</b>	<ul style="list-style-type: none"> <li>• EN 50581:2012</li> </ul>
Signed for, and on behalf of the Manufacturer :	
cab Produkttechnik Sömmerda Gesellschaft für Computer- und Automationsbausteine mbH 99610 Sömmerda	Sömmerda, 05.10.2017  Erwin Fascher Managing Director

10.3 FCC

**NOTE :** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user may be required to correct the interference at his own expense.

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