Configuration Manual

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Configuration Manual
for the following products

Family	Type
SQUIX	SQUIX 4

Edition: 08/2017 - **Part No.** 9009899

Table of Contents

1   Introduction

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

Danger!
Draws attention to an exceptionally great, imminent danger to your health or life due to hazardous voltages.

Danger!
Draws attention to a danger with high risk which, if not avoided, may result in death or serious injury.

Warning!
Draws attention to a danger with medium risk which, if not avoided, may result in death or serious injury.

Caution!
Draws attention to a danger with low risk which, if not avoided, may result in minor or moderate injury.

Attention!
Draws attention to potential risks of property damage or loss of quality.

Note!
Advices to make work routine easier or on important steps to be carried out.

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.

Choose from the following options for connecting a computer to the label printer:

- Direct connection to the Ethernet interface (6) ▷ "2.3" on page 7.
- Connection via a computer network to the Ethernet interface (6) ▷ "2.3" on page 7.
- Wi-Fi connection.
- Connection to the full-speed USB slave interface (5) ▷ "2.5" on page 7.
- Connection to the RS-232 interface.
- Connection via optional Bluetooth adapter connected to an USB master interface (4/9).

1 Power switch
2 Power connection jack
3 Slot for SD card
4 2 USB master ports for keyboard,
   scanner, USB memory stick,
   Bluetooth adapter or service key
5 USB full-speed slave port
6 Ethernet 10/100 Base-T
7 Serial RS-232 port
8 I/O interface (Option)
9 USB master port for keyboard,
   scanner, USB memory stick,
   Bluetooth adapter or service key
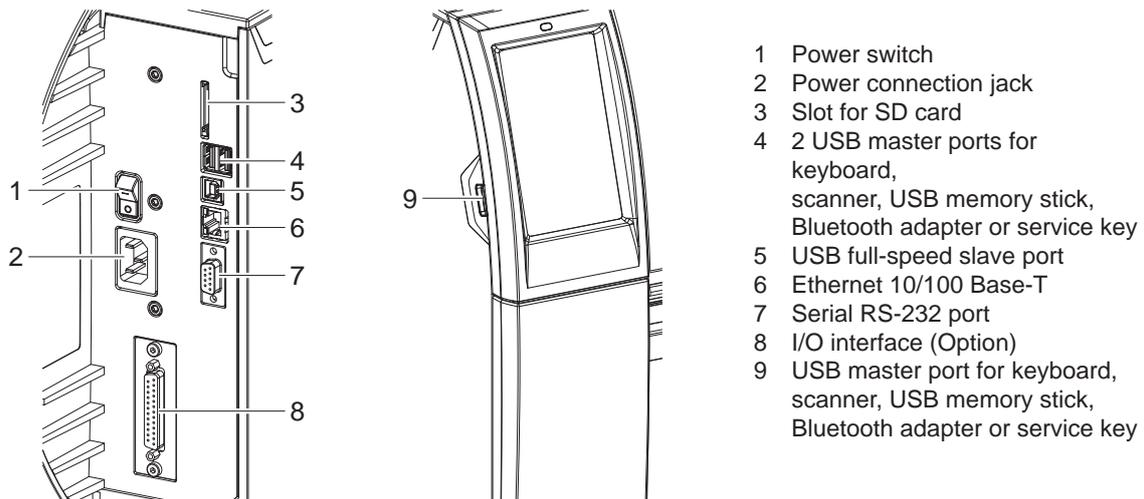
Figure 1   Connections

2.1   Print Services Raw-IP and LPR/LPD in MS Windows

▶ Install a standard TCP/IP port as additional port for printing.

▶ During installation of the new port choose between "Raw" and "LPR"

▶ Raw-IP: Enter the same port address in the printer which you have selected during installation.

ℹ **Notice!**
In the delivery status the print services RawIP (Port 9100) and LPD are activated on the printer ▷ page 20.

2.2   Adjusting Windows Printer Setting

When the printer driver valid for your Windows version is installed on your computer, Windows standard applications can be used to edit the label contents and to start the print jobs. To use the Raw-IP or LPR/LPD print services, the Windows printer settings must be adjusted:

1. Open the folder containing the printers via Start > Settings > Printers.
2. Right-click the icon of the label printer.
   A pop-up menu appears.
3. Select "Properties" in the pop-up menu.
4. Open the "Details" or "Connections" tab.
   This tab contains, among other things, the connections which were also set up when the print services were installed. The names of these connections depend on the installation tool used.
5. Select the Raw-IP or LPR connection.
6. Click **OK**.

2.3   Connecting Label Printer via Ethernet Interface

To connect the label printer to a network jack, a patch cable with an RJ45 plug for 10 Base T or 100 Base T is required.

> **! Attention!**
> ▶ **Use a shielded cable to connect the printer to the network.**

▶ Connect computer and label printer with a suitable cable.

▶ Make the settings for operation of the Ethernet interface ▷ 6.1.8 on page 19.

▶ Set up print service if necessary ▷ 2.1 on page 6.

▶ Adjust Windows printer setting ▷ 2.2 on page 6.

> **! Attention!**
> ▶ **Do not change the settings of the "IP" and "Gateway" on the printer web interface, as otherwise the connection to the printer may be lost.**

2.4   Setting Up a Wi-Fi Connection

▶ Start menu.

▶ Select *Setup > Interfaces > Wi-Fi*.

▶ Activate *Wi-Fi* ▷ 6.1.8 on page 19.

▶ Select *Access-Point*.
The search for access-points will be started.
The display shows the available access-points including the hidden access-points.

▶ Select an access point an confirm with ➡ .

▶ For hidden access-points enter the *SSID*.

▶ Setup *DHCP* or *IP* and *Mask* and if necessary *Gateway* ▷ 6.1.8 on page 19.

▶ If the network is protected a prompt to enter the passkey appears in the printer display. Enter the passkey and select ✔ .

▶ Set up print service if necessary ▷ 2.1 on page 6.

▶ Adjust Windows printer setting ▷ 2.2 on page 6.

> **! Attention!**
> ▶ **Do not change the settings of the "IP" and "Gateway" on the printer web interface, as otherwise the connection to the printer may be lost.**

2.5   Connecting Label Printer via USB Interface

The full-speed USB interface allows the label printer to be operated via a USB interface of a computer running one of the 32bit or 64bit operating systems:

• Windows Vista	• Windows 8.1	• Windows Server 2008	• Windows Server 2012
• Windows 7	• Windows 10	• Windows Server 2008 R2	• Windows Server 2012 R2.
• Windows 8	• Windows Server 2003		• Windows Server 2016

A printer driver must be installed if a USB interface will be used for connection. The printer driver for your unit is found on the "Installer DVD" which is included in the scope of delivery or on the internet.

1. Switch label printer off..

2. Connect computer and label printer with an A-B cable.

3. Switch computer on.

4. Place the "Installer DVD" in the DVD drive.

5. Exit all programs currently running.

6. Switch printer on.
   The Windows Installation Wizard is started automatically.

7. Follow the on-screen instructions. After successful installation, an icon for the label printer appears in the Windows "Printer" system folder.

8. Click icon in "Printer" system folder and make printer settings if necessary.

2.6 Connecting Label Printer via RS-232 interface

Pin	Designation	Function
1	CD	Carrier Detect
2	TxD	Transmit Data
3	RxD	Receive Data
4	DTR	Data Terminal Ready (not used)
5	GND	Ground
6	DSR	Data Set Ready (not used)
7	RTS	Request to Send
8	CTS	Clear to Send
9	RI	Ring Indication (not used)

Table 1   Pin assignment of the RS-232 interface

▶ Connect the 9-pin socket to the matching port of the computer.

▶ Install the Windows Printer Driver from the DVD included in the delivery contents of the printer.

▶ Configure the interface parameters of the interface matching to the settings of the computer. ▷ page 20.

2.7 Setting Up a Bluetooth Connection

To set up a Bluetooth connection a Bluetooth USB Adapter (Part No. 5977732) is required.

Notice!

A Bluetooth software is delivered with the Bluetooth USB Adapter.

1. Connect the Bluetooth USB adapter an to an USB master interface.

2. Switch on the printer.

3. Install the Bluetooth software on the computer.

4. Start the Bluetooth software.

5. Start "Search devices".
   The printer will be shown in a list of Bluetooth devices.

6. Optional : For an well-defined connection of the devices select the printer and click "Connect Devices".
   Either a passkey will be shown or a window will be opened where a passkey can be set. ▶ Set a passkey if necessary .
   The display of the printer shows a prompt to enter the passkey too. ▶ Enter the passkey.

7. Select in the software "Connecting" via "Serial Bluetooth Interface".
   The new interface, e.g COM5, will be shown

8. Install the current printer with connection via the new COM interface in the label software or in Windows.

3.1   Structure of the Menu

The menu contains setting options on several levels for configuring the label printer. In addition, the menu features test and diagnostic functions for supporting the configuration or checking the function of the label printer.

1st Selection Level	2nd Selection Level	3rd Selection Level
Info		
Storage		
Setup	Printing	
	Labels	
	Ribbon	
	Tearing-off	
	Cutting	
	Peeling-off	
	Labelling	
	Interfaces	Ethernet
		Wi-Fi
		Network services
		RS-232
	Errors	
	Region	
	Time	
	Display	
	Interpreter	
	ZPL	
Test		
Security		
Diagnostics		
Extras		
Help		
Service		

Table 2   Structure of the menu

3.2 Navigating in the Menu

Start level	Selection level	Parameter/function level
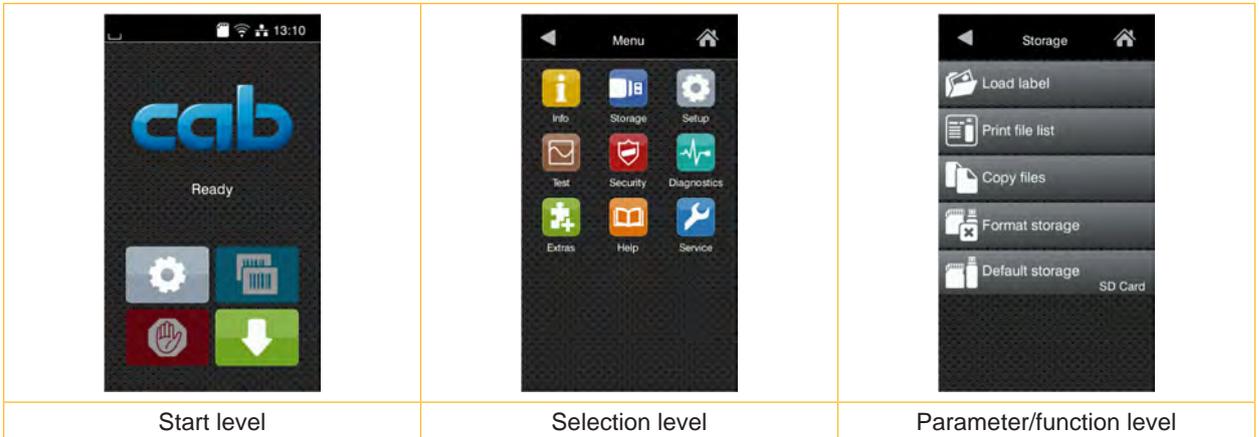
Figure 2   Menu levels

▶ To open the menu select on the start screen.

▶ Select a theme in the selection level.
  Several themes have substructures again with selection levels.
  To return from the current level to the upper one select ◀. To leave the menu select ⌂.

▶ Continue the selection until the parameter/function level is reached.

▶ Start a function. The printer will carry out the function possibly after a preparing dialogue.
  - or -
  Select a parameter to set. The setup possibilities are depending from the parameter type.

Logical parameters	Selection parameters	Numerical parameters	Date/time
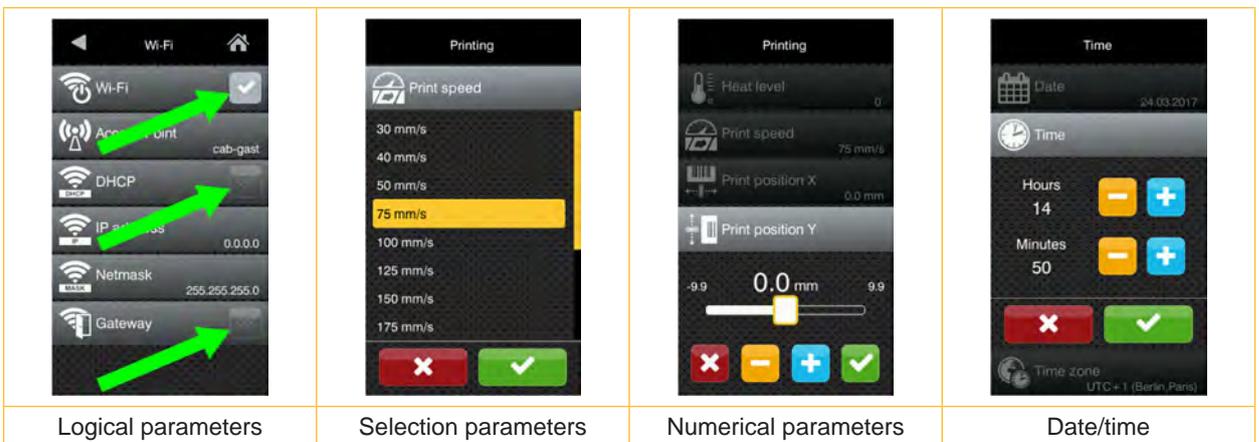
Figure 3   Samples for parameter setting

	Scroll bar for rough value setting
	Decreasing the value step-by-step
	Increasing the value step-by-step
	Return without saving the setting
	Return with saving the setting
	Parameter is disabled, touching enables the parameter
	Parameter is enabled, touching disables the parameter

Figure 4   Buttons for parameter setting

3.3   Service Key

A service key is required for accessing special service functions not accessible to the operator. This key switches the printer to service mode and enables:

- Access to additional configuration parameters
- Resetting of the service counter
- Additional information in the status print and in the device list
- Changing of the device name
- Access to PIN-protected configuration parameters and functions without entering the PIN
- Access to configuration parameters for optional assemblies, even if they are not currently installed
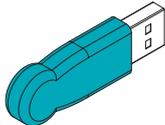
Figure 5   Service key

> **Attention!**
> **Incorrect settings and data loss via unauthorized access.**
> **Access protection is deactivated when the service key is inserted. Operation of the printer by unauthorized persons can lead to incorrect settings and data loss in this case.**
> ▶ **Provide the service key to authorized persons only.**
> ▶ **Remove service key after service work and store it in a secure location.**

▶ Insert service key into a USB master interface of the printer.

The service key also can be inserted while the device is switched on.

> **Notice!**
> **In this document, parameters and functions which are only accessible when the service key is inserted are indicated using the following note:**
> 　　　　**Access only with service key inserted!**

4   Info

The ![i] *Info* function provides an overview of important status information on the display of the printer.

▶ Start menu.
▶ Select *Info*.
▶ Return with *Close*.

The following parameters are displayed:

Line	Meaning	Example
1	Printer type Version number and creation date of the firmware	*SQUIX 4/300* *Firmware V5.08* *Jul 28, 2017*
2	IPv4 address of the printer when connected to a network via Ethernet MAC address of the network adapter on the PCB CPU	*Ethernet* *IPv4 192.168.9.10* *MAC 70:82:0e:99:91:63*
3	IPv4 address of the printer when connected to a network via Wi-Fi MAC address of the Wi-Fi adapter	*Wi-Fi* *IPv4 172.20.200.63* *MAC e8:4e:06:37:59:30*
4	Zeroconf host name	*mDNS* *cab-999163.local*
5	Operative time and number of printed labels	*Hours/no. of labels* *814h/5177* *686h/3984 (Service)*
6	Previously printed paper lengths with thermal direct printing / thermal transfer printing	*Thermo/Transfer* *4.35m/277.65m* *0.08m/248.52m (Service)*
7	Resolution, number of dots and revision of the printhead	*TPH* *300dpi, 1248dots* *Rev. 2.0.0*
8	Serial number of the PCB CPU, Revision of PCB CPU and the FPGA	*PCB* *S/N 164162031171* *PCB Rev. 0* *FPGA Rev. 12*

Table 3   *Info* display

In the [icon] *Security* menu the access rights for several printer function can be set.

▶ Start menu.
▶ Select *Security*.

Parameter		Meaning	Default
[icon]	*PIN protection*	Password to protect certain parameters and functions accessible by the control panel.	*0000*
[icon]	*Password ftpprint*	Password for FTP printing ▶ Login as ftpprint ✱ Access only when *Interfaces > Network services > FTP = "On"*	*print*
[icon]	*Password ftpcard*	Password for FTP access to storage devices (USB stick, SD card, IFFS) ▶ Login as ftpcard ✱ Access only when *Interfaces > Network services > FTP = "On"*	*card*
[icon]	*Password ftpadmin*	Password for FTP firmware update ▶ Login as ftpadmin ✱ Access only when *Interfaces > Network services > FTP = "On"*	*admin*
[icon]	*Password website*	Password for Parameter setting via web interface ▶ Login as admin ✱ Access only when *Interfaces > Network services > Website = "On"*	*admin*
[icon]	*Security web service*	Authentication type for the SOAP protocol ✱ Access only when *Interfaces > Network services > Web service = "On"*	*Digest*
[icon]	*Password web service*	Password for the SOAP protocol ✱ Access only when *Interfaces > Network services > Web service = "On"*	*soap*
[icon]	*Password VNC*	Password for the VNC server ✱ Access only when *Interfaces > Network services > VNC server = "On"*	*vnc*

Table 4   Parameters of the *Security* menu

6.1 ⚙ Configuration via Control Panel

A host of parameters for configuring the printer are found in the *Setup* menu.

▶ Configure the printer via the control panel during initial commissioning and when making major changes to the operational conditions.

▶ For changes required for processing different print jobs use software settings.

ⓘ **Notice!**

The *Setup* menu can be protected from unauthorized access via a code number (PIN).

6.1.1 🖨 Printing

▶ Start menu.

▶ Select *Setup > Printing.*

Parameter		Meaning	Default
🌡	*Heat level*	Heating value for compensating for the differing thermal behavior of printheads. Changing this value is then especially necessary if the printing intensity has changed after replacing the printhead. ▶ To adapt the printing intensity when using different media, print speeds or printing contents, you should change the heat level in the software. The settings of configuration and software are added together. The *Heat level* setting also affects the test printouts.	*0*
🌡	*Print speed*	Basic print speed setting. The print speed can be re-specified for each print job via software. The basic setting is not changed by this. The print speed setting also affects the test printouts.	*50 mm/s*
▦	*Print position X*	Shifting of the entire print image perpendicular to the direction of paper flow. The absolute shifting is limited by the margins of the print zone. Those are determined by the width of the printing line on the printhead. The setting can also be adjusted by the software. The settings of configuration and software are added together.	*0.0 mm*
▦	*Print position Y*	Shifting of the entire print image in the direction of paper flow. With positive values, printing begins later in the direction of paper flow. Shifting of the print image in the direction of paper flow also influences the peel and cut positions. ▶ Correct the *Peel position* and *Cut position* parameters by the same value in the opposite direction. The setting can also be adjusted by the software. The settings of configuration and software are added together.	*0.0 mm*
🖨	*Backfeed*	Method for backfeeding the label medium. Backfeeding is necessary in the cutting and peel-off modes since a label is pushed out passed the front edge of the next label above the print line when peeling off/cutting. *always*: Backfeeding occurs independently of label contents. *smart*: Backfeeding only occurs when the next label is not yet completely prepared when peeling off/cutting the current label. Otherwise, the second label is pushed on and completed after removal of the first label without backfeeding.	*smart*
🖨	*Backfeed position*	Offset of the backfeed movement	*1.0 mm*

Parameter		Meaning	Default
	Print on demand	Peel-off mode : Behavior after removing a label from the peel position *On*: The next label will be printed and peeled-off after touching *Off*: The next label will be printed and peeled-off immediately	*Aus*
		Cut mode : Behavior between the cuts *On*: After cutting the next label will be printed and cut after touching *Off*: All labels will be printed and cut nonstop	
	Reprint	Printing of another label with the information of the previous print job by touching . This function can be executed until the print buffer is cleared with . *Re-render:* Adaption of counter values, variable data can be newly put in. *Duplicate:* New label is identical with the last label of the print job. *Off:* No reprint	*Re-render*
	Length scale	Eliminate deviations of the print length from the length set in the programming	*0,0%*

Table 5   Parameters of the *Setup > Printing* menu

6.1.2 ⊞ Labels

▶ Start menu.

▶ Select *Setup > Labels.*

Parameter		Meaning	Default
	Label sensor	Method for detecting the starting end of the label.	*Gap sensor*
		Gap Sensor: Detection using changes in the transparency between the label and label gap.	
		Bottom-Reflect: Detection using reflex marks on the bottom of the medium.	
		Continuous media: Checking the existence of media only.	
	Extrapolate labels	The positions of the labels which are between the label sensor and the printhead are calculated from the first label recognized by the sensor and the programmed label distance. That way those labels can be printed although the printhead previously was open.	*Off*

Table 6   Parameters of the *Setup > Labels* menu

6.1.3 📠 Ribbon

▶ Start menu.

▶ Select *Setup > Ribbon.*

Parameter		Meaning	Default
	Transfer print	*On*: Sensor for monitoring the transfer ribbon is activated.	*On*
		Off: Sensor for monitoring the transfer ribbon is not activated.	
		The setting can be overwritten for each print job via software. The basic setting is not changed by this.	
	Warn level ribbon	Threshold diameter (32–74 mm) of the ribbon supply roll, if the value is undershot the "ribbon low" message will be activated	*Off*
	Pause on warning	The print job will be interrupted when the "ribbon low" message appears	*Off*
	Monitor ink side	Setting of the ribbon unwinding direction. The print job will be interrupted when the wrong ribbon winding direction has been detected. The error message "Ribbon ink side" appears.	*Off*

Table 7   Parameters of the *Setup > Ribbon* menu

6.1.4   Tearing-off

▶ Start menu.

▶ Select *Setup > Tearing-off.*

Parameter		Meaning	Default
	Tear-off mode	Positioning the label medium for tearing off at the tear-off plate. *On*: Additional advancement of the label medium which positions the label gap after the last printed label at the dispense plate. *Off*: Label advance stops once the last label has fully passed the print line.	*Ein*
	Tear-off position	Shifting of the tear-off position in the direction of paper flow. With positive values, the label strip is transported farther out of the printer.	*0.0 mm*

Table 8   Parameters of the *Setup > Tearing-off* menu

6.1.5   Cutting

∗   🔲 **If cutter is not installed, access only with service key inserted.**

▶ Start menu.

▶ Select *Setup > Cutting.*

Parameter		Meaning	Default
	Cut position	Offset of the cut position relative to the rear label edge. The setting can also be adjusted by the software. The settings of configuration and software are added together.	*0.0 mm*
	Perforation level	**with perforation cutter only** Setting of the perforation depth. The setting can also be adjusted by the software. The settings of configuration and software are added together.	*0*

Table 9   Parameters of the *Setup > Cutting* menu

6.1.6   Peeling-off

∗   🔲 **If peel-off module is not installed, access only with service key inserted.**

▶ Start menu.

▶ Select *Setup > Peeling-off.*

Parameter		Meaning	Default
	Peel-off position	Shift the position of the dispensed label relative to the dispensing edge. The setting can also be adjusted by the software. The settings of configuration and software are added together.	*0.0 mm*
	Backfeed delay	Delay time between removing the label from the peel position and the backfeed of the label.	*250 ms*

Table 10   Parameters of the *Setup > Peeling-off* menu

6.1.7   Labelling

*   If applicator is not installed, access only with service key inserted.

▶ Start menu.
▶ Select *Setup > Labelling.*

Parameter	Meaning	Default
Transfer mode	Setting the operation mode *Stamp on, Roll on, Blow on*	*Stamp on*
Cycle sequence	Setting the application mode *Print-Apply / Apply-Print* *Print-Apply*: An external start signal releases the print of a label and following the application of the label. After a cycle is complete, the pad without label waits in the start position. *Apply-Print*: An extra signal starts the print of the first label and the transfer of the label to the pad. The external start signal releases the application of the label and following the print and transfer of the next label. After a cycle is complete, the pad with a label is in the waiting position.	*Print-Apply*
Waiting position	*up*: Pad waits in the start position for the start signal *down*: Pad waits in the labelling position for the start signal Only at *Transfer mode = Blow on* and *Cycle sequence = Apply-Print*	*up*
Blow time	Switch-on time (max. 2,5 s) of the blowing air for the label transfer Only at *Transfer mode = Blow on*	*1000 ms*
Roll-on time	Dwell time (max. 5 s) of the pad in the labelling position Only at *Transfer mode = Roll on*	*1000 ms*
Support delay on	Setting the switch-on delay (max. 2,5 s) for the supporting air between print start and switching on the supporting air. The delay prevents swirling at the front of the label and, consequently, avoids faults when the label is being picked up from the printer.	*0 ms*
Support delay off	Setting the switch-off delay (max. 2,5 s) for the supporting air between the end of label forwarding and switching on the supporting air. The delay can be useful to separate the rear edge of the label from the carrier to avoid errors and to improve the accuracy of label positioning	*0 ms*
Start delay	Delay (max. 2,5 s) between start signal and the start of an labelling cycle. Allows e.g. the use of product sensors at conveyors.	*0 ms*
Lock time	All start signals coming in following the first start signal are ignored when they arrive within the lock time (max. 2,5 s).	*0 ms*
Vacuum delay	*On* - The vacuum will be switched on after the label feed is completed. *Off* - The vacuum will be switched on when the label feed starts.	*Off*
Vacuum control	Setting the label transfer check from printer to pad and from pad to product by the vacuum sensor	*On*
Peel-off position	Shift the position of the dispensed label relative to the dispensing edge. The setting can also be adjusted by the software. The settings of configuration and software are added together.	*0.0 mm*

Table 11   Parameters of the *Setup > Labelling* menu

6.1.8   Interfaces

▶ Start menu.

▶ Select *Setup > Interfaces.*

Ethernet

Parameter	Meaning	Default
Hostname	Unique identification of the printer in a network in a human readable format	*generated of OEM name and the last six digits of the MAC address*
DHCP	Method of issuing IP address *On*: Dynamic issuing of IP address by the DHCP server *Off*: Direct issuing of the IP address by the operator	*On*
> IP address	IP address of the label printer. Only valid with *DHCP = Off.*	-
> Netmask	Subnet mask (classification and address range) of the local network. Only valid with *DHCP = Off.*	-
> Gateway	Connection address between the local network and other networks.	*Off*
>> Gateway address	The IP address of the computer (router) on the network through which the connection can be established is used for this. The address of the router can also be issued via DHCP.	-
> DNS-Server	Setting the IP address of a DNS server manually The DNS server resolves the internet addresses to IP addresses e.g. to select network services such as NTP per domain name.	-

Table 12   Parameters of the *Setup > Interfaces > Ethernet* menu

Wi-Fi

Parameter	Meaning	Default
Wi-Fi	Activation of the Wi-Fi interface	*Off*
> Access-Point	Selection of the Access Point to setting up the Wi-Fi connection.	-
> DHCP	▷ *Ethernet > DHCP*	*On*
>> IP adress	▷ *Ethernet > IP adress*	-
>> Netmask	▷ *Ethernet > Netmask*	-
>> Gateway	▷ *Ethernet > Gateway*	*Off*
>>> Gateway address	▷ *Ethernet > Gateway address*	-
> DNS-Server	▷ *Ethernet > DNS-Server*	-

Table 13   Parameters of the *Setup > Interfaces > Wi-Fi* menu

Network Services

Parameter	Meaning	Default
FTP	Activation of the File Transfer Protocol	On
LPD	Activation of the network printing service LPD	On
RawIP	Activation of the network printing service RawIP and selection of the port address	9100
Website	Activation of the Hypertext Transfer Protocol for the access to the internal printer website	On
Web service	Activation of the Simple Object Access Protocol	Off
SNMP	Data exchange between printer and management station via Simple Network Management Protocol	Off
> SNMP community	Keyword to assign the SNMP rights	public
VNC server	Activation of the VNC server for remote access to the control panel	Off
Zeroconf	Activation of the auto-configuring Zeroconf method for adhoc networks	Off

Table 14   Parameters of the *Setup > Interfaces > Network services* menu

RS-232

Parameter	Meaning	Default
Baud rate	Speed (in Baud) of data transfer	115.200
Handshake	Data transfer protocol	RTS/CTS

Table 15   Parameters of the *Setup > Interfaces > RS-232* menu

📤 **I/O**

Parameter	Meaning	Default
START mode	Configuration of the I/O signal START	*Edge*
	Edge: A label will be printed by switching on 24V between START and GND_EXT.	
	Level: In **Rewind mode** labels are printed as long as 24V are switched on between START and GND_EXT. In **Peel-off mode** a label will be printed after receiving the signal LBLREM as long as 24V are switched on between START and GND_EXT.	
REPRINT mode	Configuration of the I/O signal REPRINT	*Edge*
	Edge: A label will be repeated by switching on 24V between REPRINT and GND_EXT.	
	Level: A label will be repeated as long as 24V are switched on between REPRINT and GND_EXT.	
	START/REPRINT select: A label will be repeated when 24V are switched on between REPEAT and GND_EXT and the START signal will be activated additionally.	
Automatic LBLREM	Simulation of the I/O signal LBLREM For peel-off mode without present sensor	*Off*
	On: With the signal START the removing of the previous label also will be confirmed.	
	Off: To confirm the label removing the signal LBLREM must be activated.	

Table 16   Parameters of the *Setup > Interfaces > I/O* menu

6.1.9   ⚠ Errors

▶ Start menu.

▶ Select *Setup > Errors.*

Parameter	Meaning	Default
Error-Reprint	*On:* With a correctable error and corresponding troubleshooting, the label being printed when the error occurs is repeated. *Off:* Print job is continued with the next label.	*On*
Syntax error	Printer switches to error mode after receipt of an incorrect command.	*On*
Barcode error	*On:* With faulty barcode contents or size specifications, printing is interrupted. *Off:* Printing is not interrupted if an error occurs. If barcode contents are faulty, the printer attempts to replace the incorrect data with valid characters (e.g. zeros). If barcode size specifications are faulty, a gray area is printed instead of the barcode.	*On*
Network error	Printer switches to error mode when problems with the network connection occur.	*Off*

Table 17   Parameters of the *Setup > Errors* menu

6.1.10 Region

▶ Start menu.

▶ Select *Setup > Region.*

Parameter		Meaning	Default
	Language	Setting the display language	*English*
	Country	Setting the country-specific date and time formats. The time formats can also be overwritten via software. The changes are not saved permanently, however.	*Germany*
	Keyboard	Setting of the keyboard layout when using an external keyboard or the soft keyboard on the printer display.	*Automatic* (=*Country*)

Table 18   Parameters of the *Setup > Region* menu

6.1.11 Time

▶ Start menu.

▶ Select *Setup > Time.*

Parameter		Meaning	Default
	Date	Setting of the system date in the format DD.MM.YYYY. The print output of the date occurs in the format set via the *Country* parameter. The date can also be changed via software. The change is not saved permanently, however.	-
	Time	Setting the system time in the HH:MM:SS format. When changing the time, ensure that the *Timezone*, *Daylight saving* and *Date* parameters are set correctly. The time can also be synchronized automatically via the internet using the Ethernet interface. The print output of the time occurs in the format set via the *Country* parameter. The time can also be changed via software. The change is not saved permanently, however.	-
	Time zone	Adaptation of the time display of the printer to the time zone in relation to UTC (Universal Time Coordinated).	*UTC+1*
	Daylight saving	Selection of the daylight saving regulation applicable for the region. The time is then changed automatically.	*EU*
	Time synchronisation	Activation of a service to synchronize date and time of the printer.	*NTP*
	> Time server	Address of the time server	

Table 19   Parameters of the *Setup > Time* menu

6.1.12   Display

▶ Start menu.

▶ Select *Setup > Display.*

Parameter		Meaning	Default
	Orientation	Adaptation of the display contents to the display orientation.	0°
	Brightness	Brightness of the LCD display.	8
	Time powersave	Time between the last operation and activation of energy-saving mode.	5 min

Table 20   Parameters of the *Setup > Display* menu

6.1.13   Interpreter

▶ Start menu.

▶ Select *Setup > Interpreter.*

Parameter		Meaning	Default
	Character set	Selection of the character set table for adaptation to the computer system used. Switching the character set via software is not possible. Characters not available in the selected character set can be accessed using the Unicode table.	UTF-8
	USB	Choosing between the programming languages JScript and ZPL for data transfer via USB interface	JScript
	RS-232	Choosing between the programming languages JScript and ZPL for data transfer via RS-232 interface	JScript
	FTP	Choosing between the programming languages JScript and ZPL for data transfer via FTP	JScript
	LPD	Choosing between the programming languages JScript and ZPL for printing with LPD	JScript
	RawIP	Choosing between the programming languages JScript and ZPL for printing with RawIP	JScript
	Bluetooth	Choosing between the programming languages JScript and ZPL for data transfer via Bluetooth ✱ only with Bluetooth adapter installed	JScript

Table 21   Parameters of the *Setup > Interpreter* menu

6.1.14   ZPL

▶ Start menu.

▶ Select *Setup > ZPL.*

Parameter		Meaning	Default
	> Printing width	Setting the print width for ZPL programming	100.0 mm
	> Label length	Setting the label length for ZPL programming	150.0 mm

Table 22   Parameters of the *Setup > ZPL* menu

6.2   Configuration via the Web Interface

The parameters accessible via the control panel can also be set via the web interface contained in the firmware of the printer.

The printer web interface can be accessed with a browser (e.g. Microsoft Internet Explorer, Mozilla Firefox) with JavaScript activated via the Ethernet interface or the optional Wi-Fi interface.

Calling Up the Web Interface

> ⚠ **Attention!**
> **Whenever settings are changed via the web interface you are requested to enter the user name "admin" and a password. The default value of the password is also "admin". The password can be changed via the web interface (▷ "Setup Tab" page 27).**

▶ Start the browser.

▶ Call the web interface by entering the IP address via HTTP (e.g. http://192.168.100.208).
The "Status" tab is open on the home screen.

The web interface contains the following tabs:

• Status: general status description ▷ page 25.
• Setup: configuration parameter settings ▷ page 26.
• Security: password settings ▷ page 27.
• Devices: list of the hardware and optional components ▷ page 28.
• Fonts: overview of the available fonts ▷ page 28.

6.2.1   Status Tab
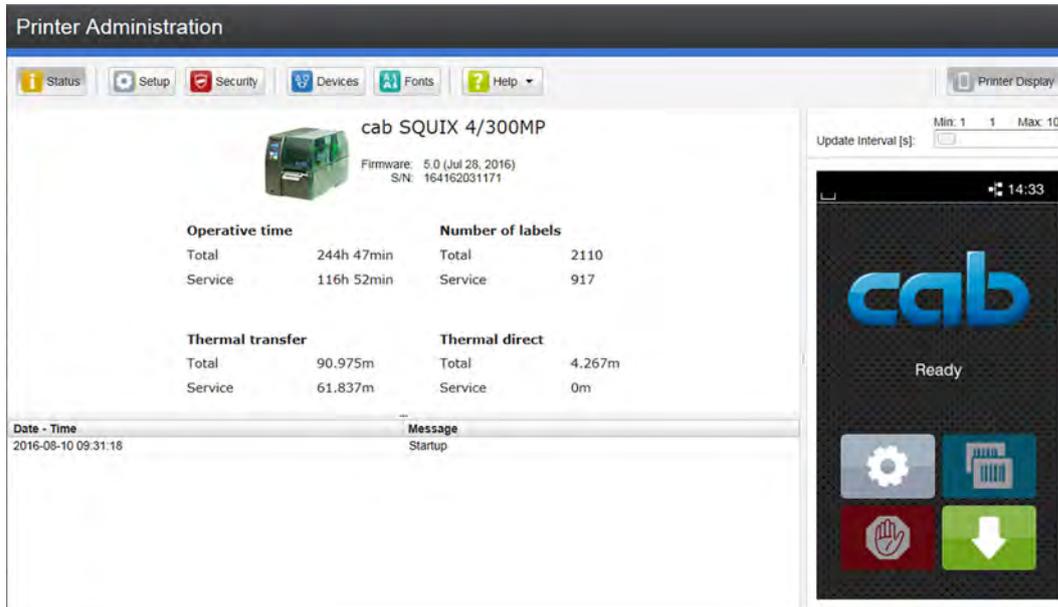
Figure 6   "Status" tab on the printer web interface

The following information is contained in the left top section of the "Status" tab:

*   Printer type
*   Firmware version
*   Serial number of the PCB CPU
*   Operative time of the printer
*   Number of labels printed since commissioning
*   Previously printed paper length with thermal transfer printing
*   Previously printed paper length with thermal direct printing

A list of the events which have occurred since the printer was switched on is to be found in the left bottom section of the tab.

The right section of the tab shows the current printer display information.

ℹ   **Notice!**

By clicking the buttons the printer can be operated in the same manner as by using the touchscreen on the device.

When the printer display is selected by mouse click, it is possible to use the computer keyboard in the same manner like an External Keyboard (▷ "16.3" on page 64) e.g. for entering variable input data.

6.2.2 Setup Tab

On the "Setup" tab all the configuration parameters can be set which are also accessible via the control panel in the Setup menu.
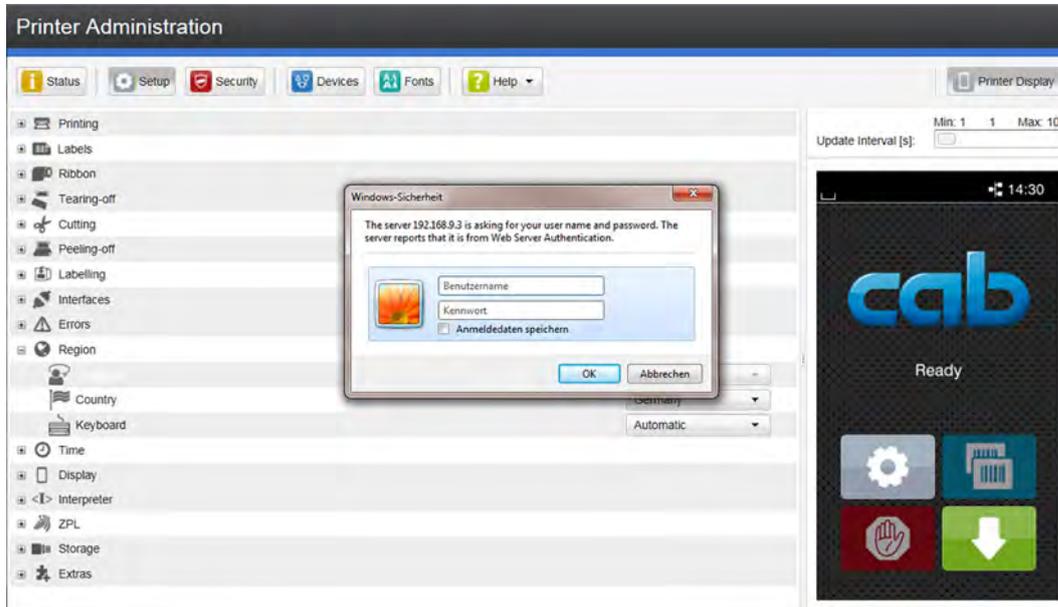
Figure 7   "Setup" tab on the printer web interface

To change a parameter:

1. Locate parameter in the tree structure.
2. Set the value of the parameter at the right end of the concerning line.
    A prompt to enter user name and password appears ▷ page 13.
3. Enter user name and password and click **OK**.

6.2.3   Security Tab

On the "Security" tab the access rights for several printer function can be set.

The tab contains the same parameters as the *Security* menu of the Setup ▷ page 13.
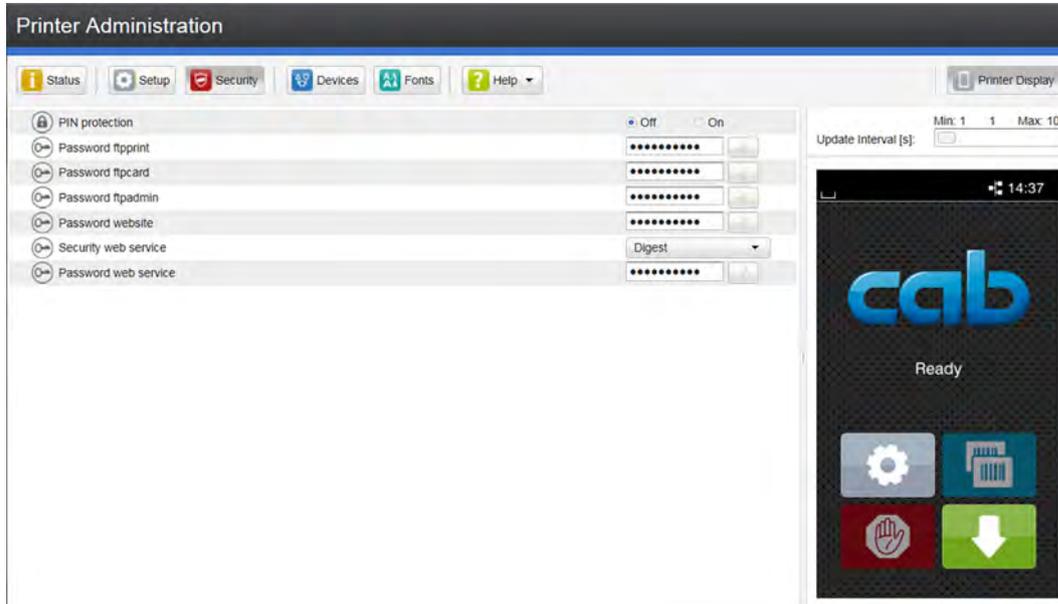
Figure 8   "Security" tab on the printer web interface

To change a parameter:

1. Locate parameter in the tree structure.
2. Set the value of the parameter at the right end of the concerning line.
    A prompt to enter user name and password appears ▷ page 13.
3. Enter user name and password and click **OK**.

6.2.4   Devices Tab

The "Devices" tab provides an overview of the most important hardware components installed in the printer and the optional devices connected.
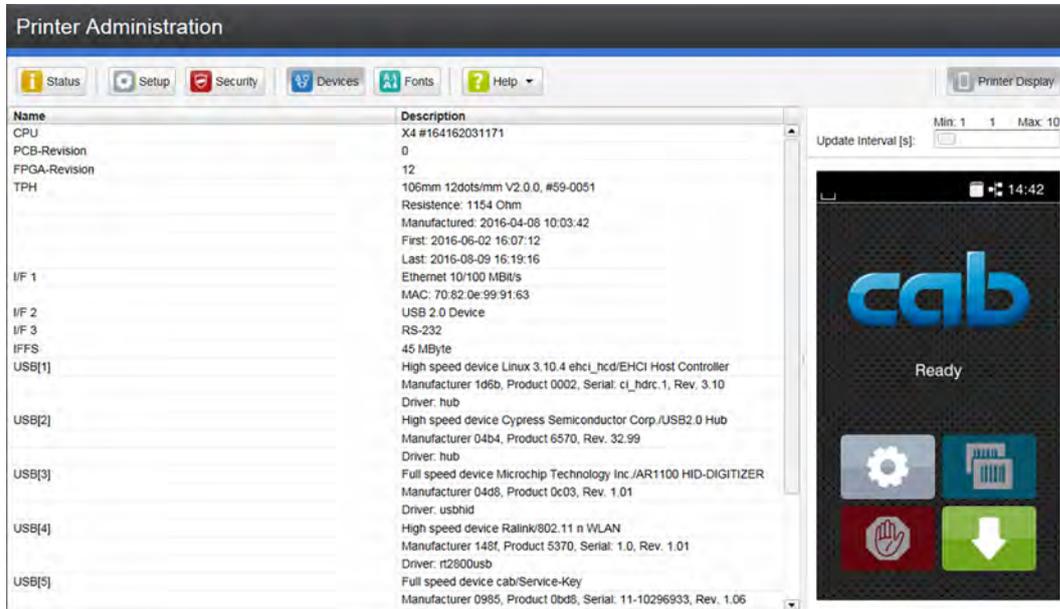
Figure 9   "Devices" tab on the printer web interface

The contents of the display correspond with those of the *Device list* ▷ "Table 24" on page 32.

6.2.5   Fonts Tab

The most important parameters of the fonts available in the printer are listed on the "Fonts" tab. The table contains both the original fonts in the printer and other fonts loaded into the printer.
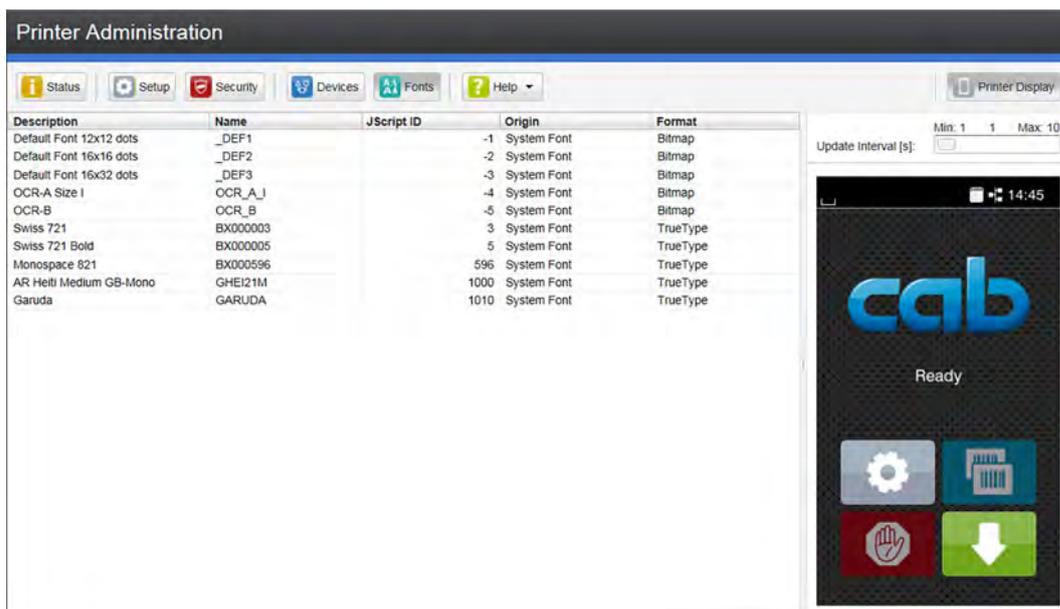
Figure 10   "Fonts" tab on the printer web interface

The parameters correspond to those in the *Font list* ▷ "Table 23" on page 31.

6.2.6   Help Menu

Independent from the chosen tab some help functions can be selected :
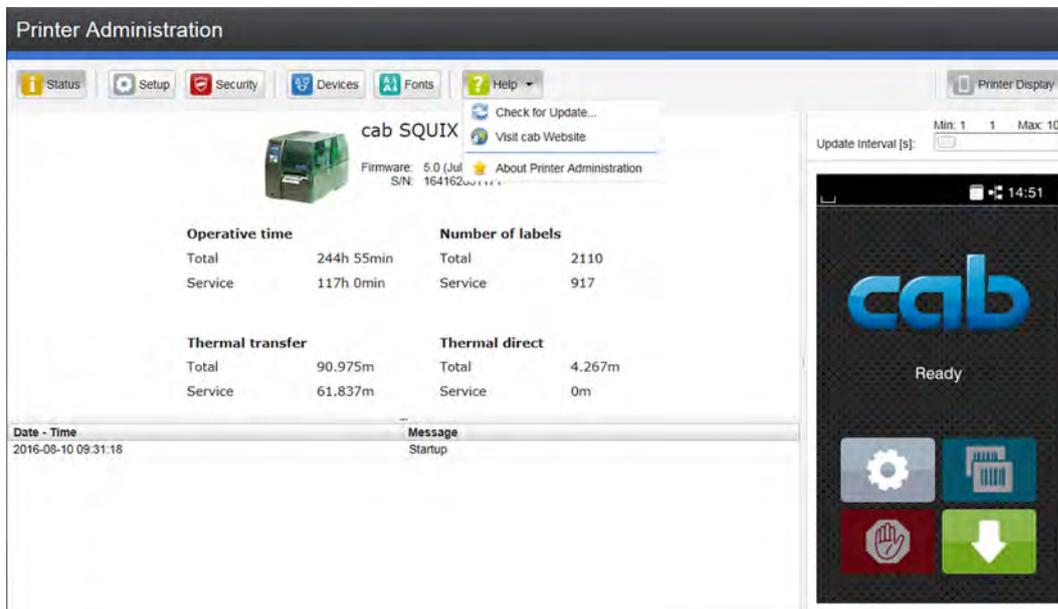
Figure 11   "Help" menu on the printer web interface

Check of the firmware version and offer for update.

Visit the cab-Website.

Information about the version and the latest alterations of the web interface.

7.1 Overview

The [icon] *Test* menu contains test functions providing information on:

- the most important configuration parameters
- the fonts available in the printer
- important hardware components and connected peripheral devices
- the print image quality and state of the thermal printhead
- available Wi-Fi networks.

7.2 [icon] Status Print

The *Status print* function prints a test image containing information on the configuration and status of the printer. The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

[i] **Notice!**

The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶ Start menu.

▶ Select *Test > Status print.*

The printout can be canceled with [icon] .

```
                Status print
        Fri Aug  4 08:02:16 2017
        cab SQUIX 4/300MP
        Firmware V5.08 (Jul 28, 2017) - #164162031171

   [icon]   Printing
Heat level                    0
Print speed                   75 mm/s
Print position X              0,0 mm
Print position Y              0,0 mm
Backfeed                      smart
Backfeed position             1,0 mm
Print on demand               Off
Reprint                       Re-render
Length scale                  0,0 %

   [icon]   Labels
Label sensor                  Gap
Extrapolate labels            Off

   [icon]   Ribbon
Transfer print                On
Warn level ribbon             32 mm
Pause on warning              Off
Monitor ink side              Off

   [icon]   Tearing-off
Tear-off mode                 On
Tear-off position             0,0 mm

   [icon]   Cutting
Cut position                  0,0 mm
Perforation level             0

   [icon]   Peeling-off
Peel-off position             0,0 mm
Backfeed delay                250 ms

   [icon]   Labelling
Transfer mode                 Stamp on
Cycle sequence                Print-Apply
Waiting position              up
Blow time                     1000 ms
Roll-on time                  1000 ms
Support delay on              0 ms
Support delay off             0 ms
Start delay                   0 ms
Lock time                     0 ms
Vacuum delay                  On
Vacuum control                On
Peel-off position             0,0 mm

   [icon]   Interfaces
Ethernet
    Hostname                  cab-999163
    DHCP                      Off
    IP address                192.168.9.13
    Netmask                   255.255.255.0
    Gateway                   Off
    DNS server                0.0.0.0
```

```
   [icon]   Wi-Fi
    Wi-Fi                     On
    Access Point              cabgast
    DHCP                      Off
    IP address                172.20.200.93
    Netmask                   255.255.255.0
    Gateway                   Off
    DNS server                0.0.0.0
Network services
    FTP                       On
    LPD                       On
    RawIP                     9100
    Website                   On
    Web service               On
    SNMP                      On
    SNMP community            public
    Zeroconf                  On
RS-232
    Baud rate                 115200
    Handshake                 RTS/CTS

   [icon]   Errors
Error-Reprint                 On
Syntax error                  On
Barcode error                 On
Network error                 On

   [icon]   Region
Language                      English
Country                       Germany
Keyboard                      Automatic

   [icon]   Time
Date                          04.08.2017
Time                          08:02:16
Time zone                     UTC+1 (Berlin,Paris)
Daylight saving               EU
Time synchronization          NTP
Time server

   [icon]   Display
Orientation                   0°
Brightness                    8
Time powersave                5 min

   [icon]   Interpreter
Character set                 UTF-8
USB                           JScript
RS-232                        JScript
FTP                           JScript
LPD                           JScript
RawIP                         JScript
Bluetooth                     JScript

   [icon]   ZPL
Print width                   100,0 mm
Label length                  150,0 mm

   [icon]   Storage
Default storage               SD Card
```

```
   [icon]   Security
PIN protection                On

   [icon]   Extras
Cleaning interval             1000 m

   [icon]   Printer Info
Operative time
    Total                     821h 57min
    Service                   694h 02min
Number of labels
    Total                     5182
    Service                   3989
Thermal transfer
    Total                     281,292 m
    Service                   252,154 m
Thermal direct
    Total                     4,347 m
    Service                   0,080 m
TPH temperature               24,8 °C
Heat voltage                  23,8 V
TPH heat level statistics
    < 0                       0,000 m
    0-7                       281,292 m
    8-14                      0,000 m
    > 14                      0,000 m
```

Figure 12   Status print
Parameters marked *italic* are only printed when the printer is equipped with the respective optional assembly or when the service key is inserted

7.3   Font list

The *Font list* function prints the most important parameters of the fonts available in the printer in tabular form. The table contains both the original fonts in the printer and other fonts loaded into the printer. The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

> **i   Notice!**
>
> **The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.**

▶   Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶   If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶   Start menu.

▶   Select *Test > Font list.*

The printout can be canceled with .

Figure 13   Font list

Column	Meaning
No.	ID number of the font required for programming (command T).
Name	Name with which the font is saved internally.
Type	Type of font generation. It provides information on the variability of the font and is important when programming (command T).
Description	Explanations of the font: size, font family. The printout occurs in the appropriate font.

Table 23   Parameters of the *Font list*

7.4 [icon] Device List

The *Device list* function prints out the most important information on hardware components of the printer and connected devices. The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

[i] **Notice!**

The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶ Start menu.

▶ Select *Test > Device list*.

The printout can be canceled with [icon].


```
                Device list
   Thu Aug 11 10:06:29 2016
   cab SQUIX 4/300MP
   Firmware V5.00 (Jul 28, 2016) - #164162031171
 Name    │ Description
 CPU     │ X4, #164162031171
         │ PCB-Rev. 0, FPGA-Rev. 12
 TPH     │ 105.7mm 11.806dots/mm X4 V59-0051, #59-0059
         │ Resistance: 1154R
         │ Manf. Fri Apr 8 10:03:42 2016
         │ First: Thu Jun 2 16:07:12 2016
         │ Last: Thu Aug 11 08:37:08 2016
 I/F 1   │ Ethernet 10/100 MBit/s
         │ MAC: 70:82:0e:99:91:63
 I/F 2   │ USB 2.0 Device
 I/F 3   │ RS-232
 IFFS    │ 45 MByte
 USBMEM  │ 3928 MByte
 SD      │ 3465 MByte
 USB [1] │ Linux 3.10.4 ehci_hcd/EHCI Host Controller
  High   │ #ci_hdrc.1,Rev. 3.10
         │ Mfr: 1D6B, ID: 0002, Class: 09/00, Protocol: 01
         │ Driver: hub
 USB [2] │ Cypress Semiconductor Corp./USB2.0 Hub
  High   │ Rev. 32.99
         │ Mfr: 04B4, ID: 6570, Class: 09/00, Protocol: 01
         │ Driver: hub
 USB [3] │ Cambridge Silicon Radio, Ltd.
  Full   │ Rev. 52.76
         │ Mfr: 0A12, ID: 0001, Class: E0/01, Protocol: 01
         │ Driver: btusb
 USB [4] │ cab/Service-Key
  Full   │ #11-10296933,Rev. 1.06
         │ Mfr: 0985, ID: 0BD8, Class: FF/00, Protocol: FF
         │ Driver: cab_key

 USB [5] │ Microchip Technology Inc./AR1100 HID-DIGITIZER
  Full   │ Rev. 1.01
         │ Mfr: 04D8, ID: 0C03, Class: 00/00, Protocol: 00
         │ Driver: usbhid
 USB [6] │ Ralink/802.11 n WLAN
  High   │ #1.0,Rev. 1.01
         │ Mfr: 148F, ID: 5370, Class: 00/00, Protocol: 00
         │ Driver: rt2800usb
 USB [7] │ USB    /Flash Disk
  High   │ #90730B001E66,Rev. 1.10
         │ Mfr: 13FE, ID: 1D00, Class: 00/00, Protocol: 00
         │ Driver: usb-storage
 USB [8] │ Cypress Semiconductor Corp./USB2.0 Hub
  High   │ Rev. 32.99
         │ Mfr: 04B4, ID: 6570, Class: 09/00, Protocol: 01
         │ Driver: hub
 HEALTH  │ PS 23,8V, BATT OK, TPH 27,9°C
```
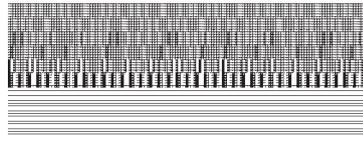
Figure 14 Device list
Parameters marked *italic* are only printed when the service key is inserted

Name	Information
CPU	Type and serial number of the PCB CPU Revision of PCB CPU and FPGA
TPH	Print width and resolution of the installed thermal printhead
IF [x]	Type of interfaces installed **x**: Number of interface
IFFS	Size of the Internal Flash File System
USBMEM	Size and type of an installed USB storage device
SD	Size and type of an installed SD card
USB [a] Speed	Type and revision of installed USB devices **a**: number of USB device **Speed**: data transfer speed (low, full, high) The following properties are only displayed when the service key is inserted: **Mfr.**: Manufacturer ID. This identifies the manufacturer of the USB device **Class**: Code for the USB device class **Protocol**: Code for the type of communication with the USB device **Phase**: Internal value for troubleshooting
HEALTH	Printhead voltage, charge state of the lithium battery on the PCB CPU, temperature of CPU and printhead
Line pattern	Lines differing in thickness at various distances. They are used to evaluate the print quality.

Table 24 Parameters of the *Device list*

7.5   ⊞   Test Grid

The *Test grid* function prints out a geometric pattern on a background grid. This allows you to assess the evenness of the print quality.

The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

ⓘ   **Notice!**

The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

▶   Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶   If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶   Start menu.

▶   Select *Test > Test grid*.
    The geometric pattern is printed every 3 seconds once the Test grid function is started.
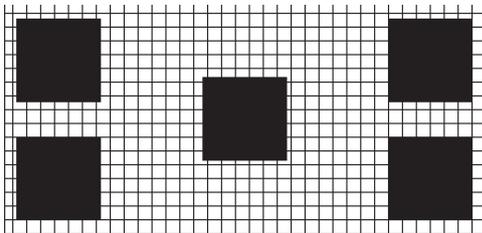
The printout can be canceled with 🤚 .

Figure 15   Test grid

7.6   ![icon] Wi-Fi Status

∗   **Access only when Wi-Fi is activated!**

The *Wi-Fi status* function prints out a list with the most important parameters of the accessible Wireless Access Points. The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

ⓘ   **Notice!**
The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

▶   Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶   If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶   Start menu.

▶   Select *Test > Wi-Fi status*.

The printout can be canceled with ![icon] .

Figure 16   Wi-Fi status

The parameters have the following meaning :

Column	Meaning
Channel	Channel; frequency range of the Access Point
Name/BSS ID	Name of the wireless LAN MAC address of the Access Points
Signal level	Scale of the Wi-Fi signal strength
Security	Type of data encryption

Table 25   Parameters of the *WiFi status*

The ⚕ *Diagnostics* menu contains several functions for troubleshooting

8.1 ℹ️ Printhead

The function *Printhead* provides an overview of important status information concerning the printhead on the display of the printer.

▶ Start menu.
▶ Select *Diagnostics > Printhead*.
▶ Return with *Close*.

The following parameters are displayed:

Line	Meaning	Example
1	Serial number of the printhead	*Serial no.* *59-0051*
2	Part number of the printhead	*Part no.* *5977310*
3	Firmware revision of the printhead	*Firmware* *2.0.0*
4	Temperature of the printhead	*Temperature* *26.4 °C*
5	Resolution of the printhead	*Resolution* *12 DPMM (dots/millimeter)*
6	Print width / Number of dots	*Width/no. of dots* *106mm/1248*
7	Operative time/Number of printed labels with the current printhead	*Hours/no. of labels* *773h/5354*
8	Previously printed paper lengths with thermal direct printing / thermal transfer printing	*Thermal/Transfer* *4.35m/285.49m*
9	Previously printed paper length with heat level < 0	*Heat level <0* *0.00m*
10	Previously printed paper length with heat level 0 - 7	*Heat level 0-7* *289.84m*
11	Previously printed paper length with heat level 8 - 14	*Heat level 8-14* *0.00m*
12	Previously printed paper length with heat level > 14	*Heat level >14* *0.00m*
13	Resistance of the printhead	*Resistance* *1154Ω*
14	Description of the printhead	*Description* *105.7mm 11.806dots/mm X4*

Table 26 *Printhead* display

8.2 ASCII Dump Mode

ASCII Dump Mode offers the option of checking incoming control sequences at an interface. The commands are printed out as text. In addition, a corresponding error message is printed out immediately after an error occurs.

The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

i **Notice!**
The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

i **Notice!**
In case of questions about programming, keep a printout of your label file which was created in *ASCII Dump Mode* handy. The printout can be transmitted clearly via fax.

▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.
▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.
▶ Start menu.
▶ Select *Diagnostics > ASCII Dump Mode*.
▶ Send print jobs.
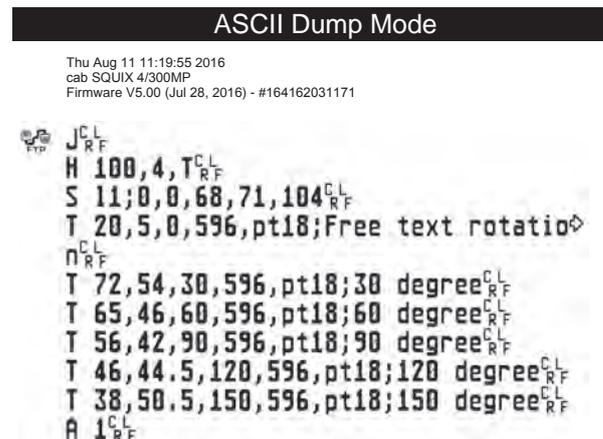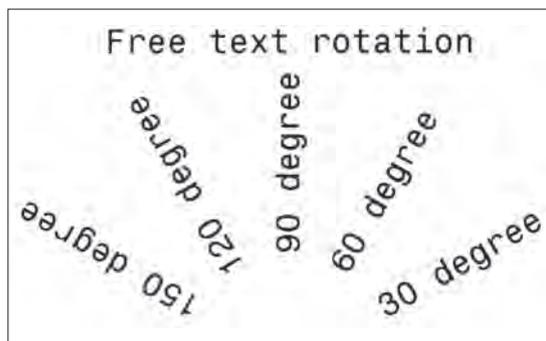▶ Select 🤚 to cancel the printout or switch to the *Ready* mode.

Example:

Figure 17 Example label printed normally (left) and in *ASCII dump mode* (right)

The control characters (ASCII-Code 00...31) are presented in stylized design.

e.g. : ^L_F : Code 10 (0A) - line feed

^C_R : Code 13 (0D) - carriage return

8.3   ▥   Label Profile

The *Label profile* function carries out a longer label advance. It saves the values measured by the label sensor here and then prints them out in a diagram.
The printout is used to check label detection in conjunction with the optical properties of the label medium.
The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

ⓘ   **Notice!**

The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

▶   Select the label sensor to be tested in the *Setup > Labels* menu ▷ page 16.

▶   Load the label medium to be tested into the printer.

▶   Start menu.

▶   Select *Diagnostics > Label profile*.
     The printer performs a longer label advance. The label sensor measures the transparency/reflection capacity of the label material here. The message *Insert* appears in the display once the advance is complete.

▶   Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶   If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶   Start the diagram printout with *Continue*.
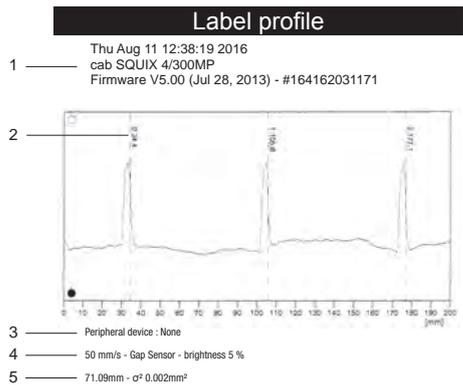
The printout can be canceled with ✋ .

Figure 18   Label profile

No.	Information
1	Date and time of the printout Device type Version and creation date of the firmware Serial number of the PCB CPU Firmware version and serial number of the label sensor
2	Coordinate in the direction of paper flow at which the label start was detected
3	Type of peripheral device connected
4	Print speed, method of label detection (Gap sensor / Bottom-reflect sensor) Brightness of the sensor LED during the measurement
5	Average value and variation of label distances

Table 27   Information in *Label profile*

8.4 ⚠️ Event Log

The label printer saves the following events in the *Event log*:

- Hardware fault
- Printhead replacement
- Firmware updates
- Changing the OEM name
- Resetting of the service counters

The printout occurs using the heat level and print speed specified in the *Setup > Printing* menu.

ℹ️ **Notice!**

The printout occurs without taking the label gaps into consideration. This is why endless media are most suitable for this purpose.

▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶ Start menu.

▶ Select *Diagnostics > Event log*.

```
                    Event log
        Thu Aug 11 14:04:15 2016
        cab SQUIX 4/300MP
        Firmware V5.00 (Jul 28, 2016) - #164162031171

    Date            Description
    30.06.16 07:45  TPH (#59-0051) -> 300 dpi, 1248 dots
    30.06.16 07:46  Firmware update -> V5.00 (0000)
    12.07.16 07:38  Firmware update -> V5.00 (0000)
    13.07.16 13:35  Druckermodell: cab SQUIX 4/300MP
    02.08.16 14:01  Firmware update -> V5.00 (0000)
    05.08.16 11:38  Clear service counters
    05.08.16 11:38  Cleaning interval -> 41242 + 1000000
```

Figure 19   Event log

8.5   Save Data Steam

＊   **Access only with external storage device!**

The function *Save data stream* allows to store data incoming via an interface as an .lbl file to an external storage device (SD card, USB memory module) installed on the printer.

▶ Insert SD card or USB memory module.

▶ Start menu.

▶ Select *Diagnostics > Save data stream*.

▶ Select the external storage device.

▶ Enter a file name.
The predefined name is composed of the identifier "log", date, clock time and the suffix ".lbl", but may also be altered.
Confirm the selection with ✔ .

▶ In the status line of the display the data saving is indicated by the symbol ◎ .

▶ Send print jobs. All data received by the printer are stored in the .lbl file.

▶ To complete the function select *Diagnostics > Save data stream* again and confirm with *OK*. The .lbl file will be stored in the root of the storage device.
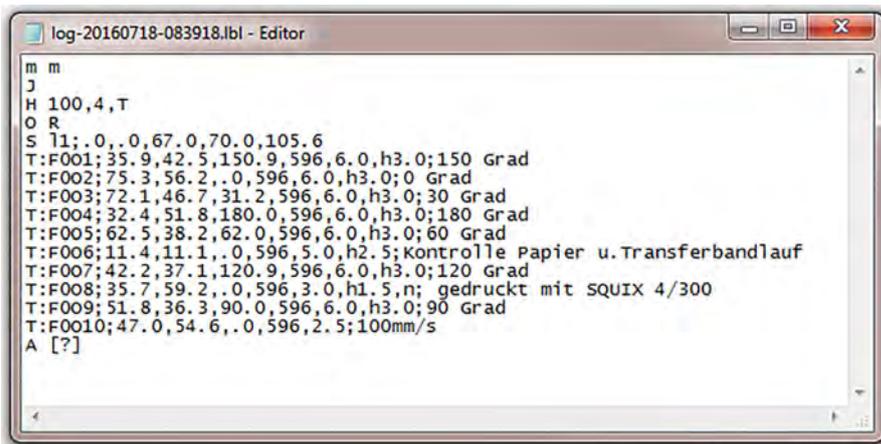

```
log-20160718-083918.lbl - Editor
m m
J
H 100,4,T
O R
S l1;.0,.0,67.0,70.0,105.6
T:F001;35.9,42.5,150.9,596,6.0,h3.0;150 Grad
T:F002;75.3,56.2,.0,596,6.0,h3.0;0 Grad
T:F003;72.1,46.7,31.2,596,6.0,h3.0;30 Grad
T:F004;32.4,51.8,180.0,596,6.0,h3.0;180 Grad
T:F005;62.5,38.2,62.0,596,6.0,h3.0;60 Grad
T:F006;11.4,11.1,.0,596,5.0,h2.5;Kontrolle Papier u.Transferbandlauf
T:F007;42.2,37.1,120.9,596,6.0,h3.0;120 Grad
T:F008;35.7,59.2,.0,596,3.0,h1.5,n; gedruckt mit SQUIX 4/300
T:F009;51.8,36.3,90.0,596,6.0,h3.0;90 Grad
T:F0010;47.0,54.6,.0,596,2.5;100mm/s
A [?]
```

Figure 20   Saved data stream

8.6   Save Print Image

∗   **Access only with external storage device!**

The function *Save print image* allows to store the last print image as a .png file to an external storage device (SD card, USB memory module) installed on the printer.

▶   Insert SD card or USB memory module.

▶   Start menu.

▶   Select *Diagnostics > Save print image*.

▶   Select the external storage device.

▶   Enter a file name.
The predefined name is composed of the identifier "img", date, clock time and the suffix ".png", but may also be altered.

▶   Confirm the selection with   ✅   . The .png file will be stored in the root of the storage device.
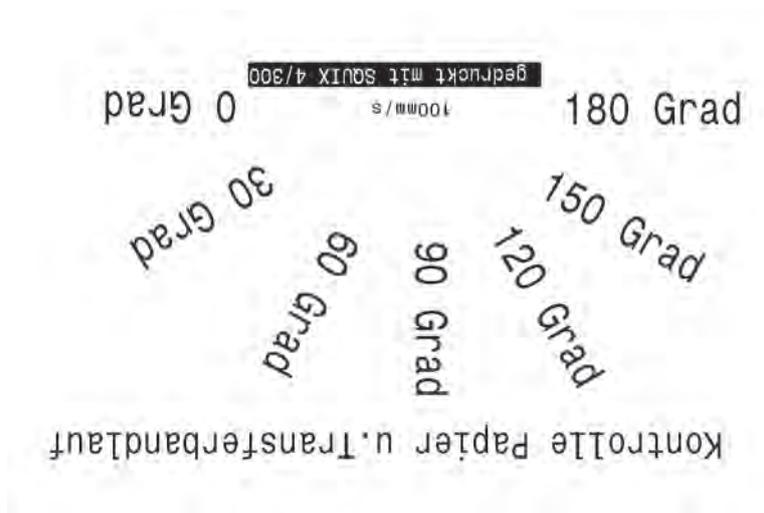

Figure 21   Saved print image

8.7   Save System Log

∗   **Access only with external storage device!**

The function *Save system log* allows to store several system files packed to a .zip file to an external storage device (SD card, USB memory module) installed on the printer.

▶   Insert SD card or USB memory module.

▶   Start menu.

▶   Select *Diagnostics > Save system log*.

▶   Select the external storage device.

▶   Enter a file name.
     The predefined name is composed of the identifier "sys", date, clock time and the suffix ".png", but may also be altered.

▶   Confirm the selection with ✔ . The display shows the several steps of saving.

Figure 22   System log saving

▶   Confirm the completion of saving with ✔ . The .zip file will be stored in the root of the storage device.

9   Extras

9.1   ⬛ Firmware Update

ℹ **Notice!**
The firmware file can be obtained from the internet.

∗   **Access only with external storage device!**

▶ Copy the firmware file to the "misc" directory of the storage device. This can be done on a computer or via FTP on the printer.

▶ Insert the prepared storage device into the printer.

▶ Start menu.

▶ Select *Extras*.
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.

▶ Select *Firmware update*.
The display shows the selection of external storage devices and the firmware files stored on the devices.

▶ Select a file and confirm with ✔ .
The selected firmware file is copied. A progress indicator is displayed while the firmware is being copied. After completion the printer will be re-started.

▶

ℹ **Notice!**
The firmware update also can be done via FTP printer management ▷ "13.4" on page 57.

9.2   ⬛ Save Settings

With the *Save settings* function the printer configuration can be saved to a storage device.

▶ Start menu.

▶ Select *Extras*.
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.

▶ Select *Save settings*.

▶ Select the external storage device.

▶ Enter a file name.
The predefined name is composed of the identifier "gui", date, clock time and the suffix ".xml", but may also be altered.

▶ Confirm the selection with ✔ . The .xml file will be stored in the folder /misc of the storage device.

An error message appearing during the saving procedure may be caused by an unreadable medium (e.g. unknown medium, unformatted medium) ▷ "14.5.4" on page 60.

9.3   Load Settings

A printer configuration previously saved to a storage device can be loaded with the *Load settings* function.

▶ Start menu.

▶ Select *Extras*.
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.

▶ Select *Load settings*.

▶ Select the desired file.

▶ Confirm the selection with ✔ . Loading of the configuration data starts. Do not remove the USB flash drive until the loading procedure is complete. The printer returns to the *Extras* menu.

If an error occurs during the loading procedure, an error message appears in the display. Restart the loading procedure in this case. If an error occurs again, the configuration parameters must be entered via the control panel.

9.4   Reset Settings

With the *Default settings* function all setup parameters excepting the passwords ▷ page 13 can be reset to the default values.

▶ Start menu.

▶ Select *Extras*.
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.

▶ Select *Reset settings*.
The display shows "Reset settings*".*

▶ Select *Continue*. The setup parameters will be reset and printer returns to the *Extras* menu.

9.5   Reset Passwords

The function *Reset passwords* allows to reset all passwords for the network services to the default values.

▶ Start menu.

▶ Select *Extras*.
If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.

▶ Select *Reset passwords*.
The display shows "Reset passwords*".*

▶ Select *Continue*. The passwords will be reset and printer returns to the *Extras* menu.

Function	User name	Password
Web interface access	admin	admin
FTP printing	ftpprint	print
FTP access to storage devices	ftpcard	card
FTP firmware update	ftpadmin	admin
Web service	soap	soap

Table 28   Default passwords

9.6   Cleaning Interval

With the parameter *Cleaning interval* an interval for the printhead cleaning can be set in steps of 100 m media passage.

If the set length of the medium (label strip, transfer ribbon) has passed the printhead and an error occurs in the flow of the medium (e.g. label end, transfer ribbon end), the *Clean printhead!* message appears in the display.

The error message for the error which occurred is not displayed until the *Clean printhead!* message is acknowledged. As long as no errors occur in the medium flow, no messages are displayed and the print job is continued even if the cleaning interval has passed.

▶ Start menu.

▶ Select *Extras*.
  If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.

▶ Select *Cleaning interval*.

▶ Select a new value and confirm the selection with ✅ .

9.7   Legal Notices

The *Legal notices* function shows the licenses and software libraries of third party solutions used in the printer firmware.

▶ Start menu.

▶ Select *Extras*.
  If the menu is protected via a PIN a prompt appears in the display. Enter the code number and confirm it.

▶ Select *Legal notices*.
  The notices will be shown on the display

▶ Select *Close* to leave the notices.

The *Help* menu contains video clips about important operations.

▶   Start menu.

▶   Select *Help.*
A list of clips will be shown.

▶   Select a clip.
The playback of the clip will start.

Figure 23   Help video clip

The playback can be controlled by buttons:

	✖	Leave current clip, return to clip selection
	⏸	Pause playback
	▶	Start playback
	⏹	Stop playback, return to start

Figure 24   Buttons for playback control

11.1 ⊞ Reset Service Counter

Access only with service key inserted!

The printer has total and service counters.

- Total counter: The total counter contains the values for the entire service life of the printer up to now. The values of the total counter are displayed in the *Info* menu and in the *Status print*.
- Service counter: The service counter can be reset after more substantial maintenance or repair work with the service key inserted. Here, it provides information on the printing output since the last reset. The values of the service counter are displayed in the *Status print*.

The following data is recorded in both counters:

Data	Description
Operative time	Printer switch-on time
Number of labels	Number of labels printed
Transfer printing	Length of medium printed with transfer printing
Thermal printing	Length of medium printed with thermal direct printing

Table 29   Total and service counter data

▶ Insert service key into an USB master interface.
▶ Start menu.
▶ Select *Service > Reset service counter*.
  The display shows *Reset service counter.*
▶ Select *Continue*. The data recorded by the service counter is set to the value 0.

The status print can be used to check whether the values were reset.

11.2 ⊞ Calibrate Label Sensor

Access only with service key inserted!

With the *Calibrate label sensor* function label sensor can be adjusted. This is necessary if sensor itself or CPU PCB has been changed.

▶ Insert service key into an USB master interface.
▶ Start menu.
▶ Select *Service > Calibrate label sensor*.
  The display shows *Remove labels* .
▶ Remove labels and transfer ribbon from the printer.
▶ Select *Continue*.
  If the calibration was successful the message *Sensor successfully calibrated* appears.
▶ Confirm the completion with *Close*.

11.3   Printhead Zero Position X

Access only with service key inserted!

The purpose of the *Printhead zero pos. X* setting is to fundamentally align the printing image to the printhead perpendicular to the printing direction in order to compensate for printhead tolerances.

1. Determine the deviation of the actual from theoretical position of the printing image perpendicular to the printing direction.
2. Select menu *Service > Printhead zero pos. X*.
3. Choose a setting that counteracts deviation.

11.4   Printhead Zero Position Y

Access only with service key inserted!

The purpose of the *Printhead zero pos. Y* setting is to fundamentally align the printing image to the printhead in the printing direction in order to compensate for printhead tolerances.

1. Determine the deviation of the actual from theoretical position of the printing image in the printing direction.
2. Select menu *Service > Printhead zero pos. Y*.
3. Choose a setting that counteracts deviation.

11.5   Printer Model

Access only with service key inserted!

With the *Printer model* function the firmware can be adapted to the device type.

▶   Start menu.
▶   Select *Service > Printer Model*.
▶   Select a model.

Following the *Info* function, all test prints and the web interface show the selected prucker model.

12 I/O Interface

For use in a network the printer is equipped with an I/O interface.

12.1 Pin Assignment

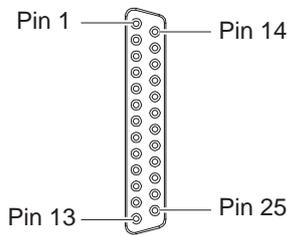The interface has a 25 pin SUB-D connector.

Figure 25   I/O interface

ℹ **Note!**

The function of the outputs on the pins 4, 9 10 and 21 can be re-defined temporarily by direct programming e.g. to control external devices with the user bits 0 to 3 ▷ Programming Manual.

Pin	Signal	Name	Description	Activation / Active State
1	⟳←	FSTLBL	Print first label only for *Cycle sequence = Apply-Print*	+24 V between Pin 1 and Pin 25
2	-	-	Do not use	
3	⟳►	ENDPOS	Applicator is in the position of transferring the label onto the product.	+24 V on Pin 3
4	⟳►	FEEDON	Media transport ON Labels are fed by the printer	+24 V on Pin 4
		Bit 0	User Bit 0 is set	
5	⟳►	HOMEPOS	Applicator is in the position where the label is taken up from the printer.	+24 V on Pin 5
6		GND_INT	Ground (0 V) for sensors or trigger switches	
7	-	-	Do not use	
8	-	-	Do not use	
9	⟳►	JOBRDY	Print job ready Print jobs are stored in the print module.	+24 V on Pin 9
		Bit 1	User Bit 1 is set	
10	⟳►	READY	Printer is ready	+24 V on Pin 10
		Bit 2	User Bit 2 is set	
11	-	-	Do not use	
12	⟳←	REPRINT	The last printed label will be repeated.	+24 V between Pin 12 and Pin 25
13	⟳←	START	Print start signal only for *Print on demand = On*	+24 V between Pin 13 and Pin 25
14	⟳←	PAUSE	Pause ON/OFF	Pause ON when +24 V between Pin 14 and Pin 25
15	⟳►	RIBWARN	Warning end of ribbon The ribbon supply roll diameter has undershot a predefined level	0 V on Pin 15
16	⟳←	LBLREM	Label removed For peel-off mode only. Confirmation of the superior control that the label has been taken from the peel-off position. Required for the validity of a new start signal.	Switch on +24 V between Pin 16 and Pin 25
17	⟳←	JOBDEL	Cancel print job The current print job is canceled and deleted from the print buffer.	Switch on +24 V between Pin 17 and Pin 25
18	⟳←	RSTERR	Reset Error state of the printer will be reset.	Switch on +24 V between Pin 18 and Pin 25

Pin	Signal	Name	Description	Activation / Active State
19		P24_INT	Internal operating voltage +24 V, Si T 100mA for external consumers e.g. sensors, trigger switches	
20		P24_EXT	External operating voltage +24 V	
21	⊝▶	PEELPOS	Label in peel-off position For peel-off mode only. A label is in peel-off position.	+24 V on Pin 21
		Bit 3	User Bit 3 is set	
22	⊝▶	ERROR	General error message The operation will be stopped and the error type will be displayed.	0 V on Pin 22
23	⊙—	STOP	Stop signal to interrupt the operation	Switch on +24 V between Pin 23 and Pin 25
24	-	-	Do not use	
25		GND_EXT	Ground of the external 24 V	

Table 30   Pin assignment of the I/O interface

12.2   Circuit Diagram of Inputs and Outputs

Digital Inputs

- conform to IEC/EN 61131-2 (Type 3)
- Operating voltage: 24 V DC (9,6..35 V)
- Switching logic: PNP switching
- Low level „0": < 7 V DC
- High level „1": > 11 V DC
- Input current per channel: 1,5..2,5 mA (at 24 V DC)
- Reverse polarity protection: yes
- ESD protection: conform to IEC/EN 6100-4-4

Digital Outputs

- conform to IEC/EN 61131-2
- Operating voltage: 24 V DC (11..35 V)
- Switching logic: PNP switching
- Output current per channel: 625 mA (overload protection)
- Short-circuit protection: yes
- Reverse polarity protection: yes
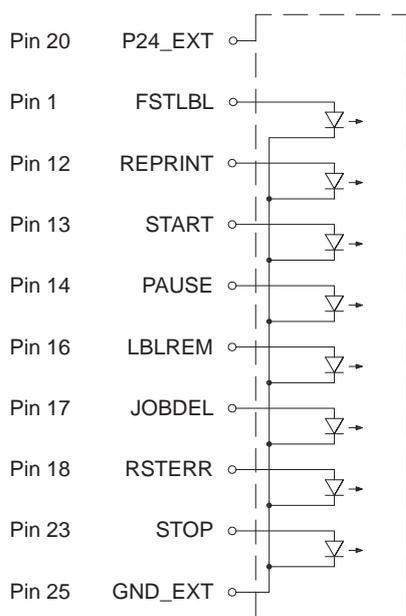- ESD protection: conform to IEC/EN 6100-4-4

Pin 20	P24_EXT
Pin 1	FSTLBL
Pin 12	REPRINT
Pin 13	START
Pin 14	PAUSE
Pin 16	LBLREM
Pin 17	JOBDEL
Pin 18	RSTERR
Pin 23	STOP
Pin 25	GND_EXT

Figure 26   Connecting inputs

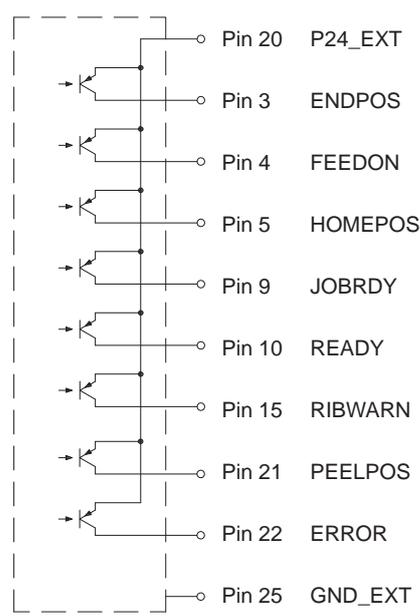| Pin 20 | P24_EXT |
Pin 3	ENDPOS
Pin 4	FEEDON
Pin 5	HOMEPOS
Pin 9	JOBRDY
Pin 10	READY
Pin 15	RIBWARN
Pin 21	PEELPOS
Pin 22	ERROR
Pin 25	GND_EXT

Figure 27   Connecting outputs

12.3   Solution Examples

12.3.1   Peeling-off on Demand with Present Sensor PS800 / PS900 / PS1000

In the standard peel-off mode a label will be printed immediately after the previous label has been taken from the peel position.
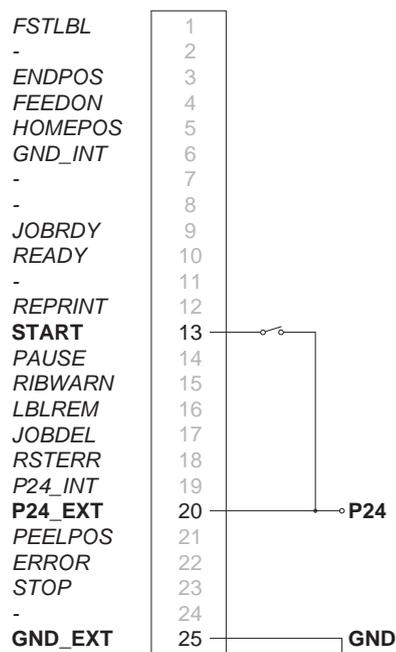
Using the I/O interface the print of the next label can be triggered by an external signal.
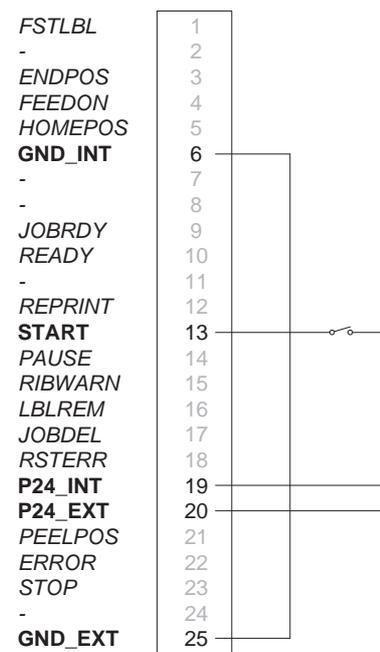
Requirements:
- Operation with Present Sensor PS800, PS900 or PS1000
- External circuit as shown in Figure 28.
- Setting *Printing > Print on Demand = "On".*

Operation:
▶ Send a print job.
▶ Activate **START**.
  The first label will be printed and transported to the peel position.
▶ Remove the label.
▶ Activate **START** to start the next cycle.

FSTLBL	1		
-	2		
ENDPOS	3		
FEEDON	4		
HOMEPOS	5		
GND_INT	6		
-	7		
-	8		
JOBRDY	9		
READY	10		
-	11		
REPRINT	12		
START	13		
PAUSE	14		
RIBWARN	15		
LBLREM	16		
JOBDEL	17		
RSTERR	18		
P24_INT	19		
P24_EXT	20	**P24**	
PEELPOS	21		
ERROR	22		
STOP	23		
-	24		
GND_EXT	25	**GND**	

Operation with external voltage supply   Operation using the internal voltage

Figure 28   External circuit for peeling-off on demand with Present Sensor PS800 / PS900 / PS1000

12.3.2   Peeling-off on Demand without Present Sensor

In the peel-off mode with PS800 or PS900 the label removal from the peel position is detected by an optical sensor.

Using the I/O interface the label removal can be confirmed by the external signal **LBLREM**. That way it is possible to operate the printer in peel-off mode without present sensor.

Starting Print and Confirming Label Removal with Two Signals

Requirements:

*   Operation without present sensor.
*   External circuit as shown in Figure 29
*   Setting *Printing > Print on Demand = "On"*.
*   Setting *Interfaces > I/O > Automatic LBLREM = "Off"*

Operation:

▶   Send a print job.
▶   Activate **START**.
    The first label will be printed an transported to the peel position.
▶   Remove the label.
▶   Confirm the label removal with signal **LBLREM**.
▶   Activate **START** to start the next cycle.

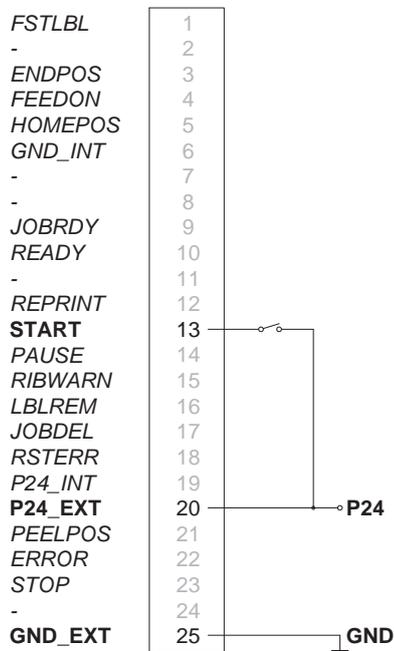Operation with external voltage supply   Operation using the internal voltage
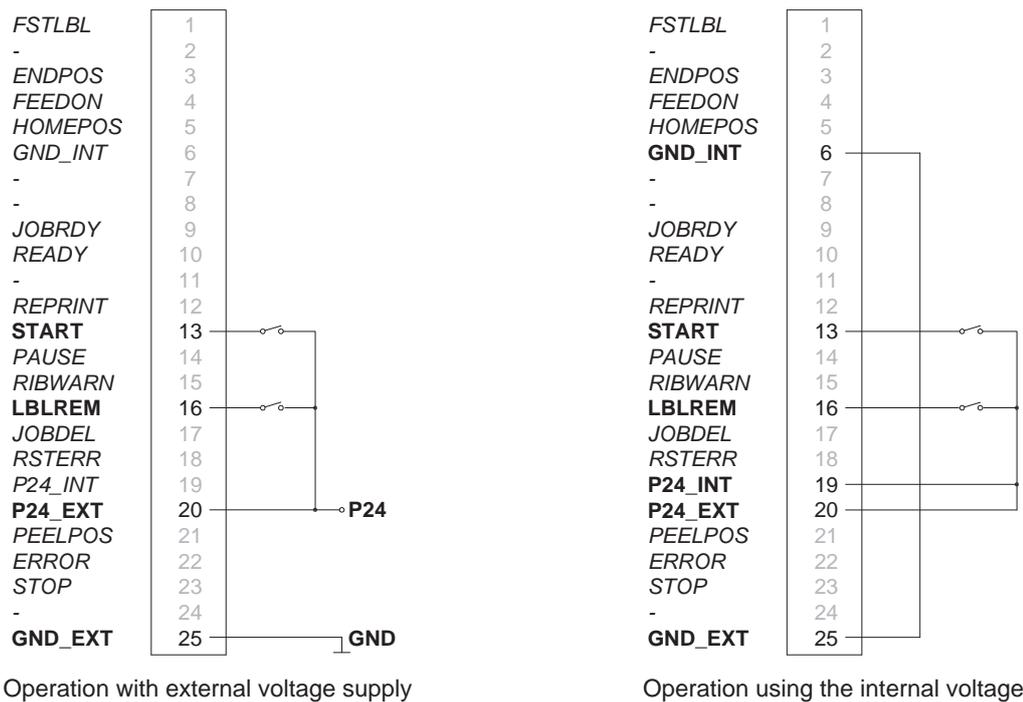
Figure 29   External circuit for peeling-off on demand without present sensor with two signals

Starting Print and Confirming Label Removal with Signal LBLREM
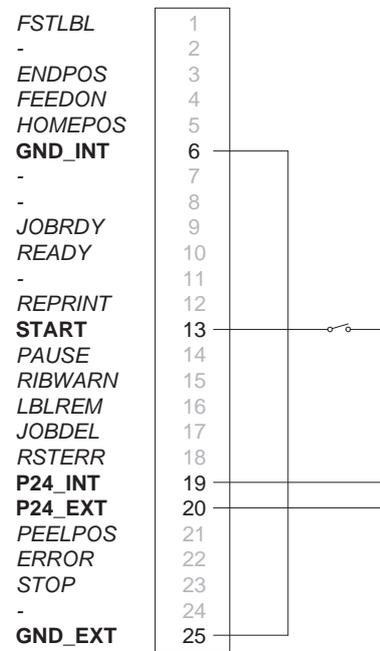
Requirements:

- Operation without present sensor.
- External circuit as shown in Figure 30.
- Setting *Printing > Print on Demand = "On".*
- Setting *Interfaces > I/O > START mode = "Level".*
- Setting *Interfaces > I/O > Automatic LBLREM = "Off".*

Operation:

▶ Hold signal **START** permanently active.

▶ Send a print job.
  The first label will be printed an transported to the peel position.

▶ Remove the label.

▶ Confirm the label removal with signal **LBLREM**.
  The next cycle will be started.

Operation with external voltage supply   Operation using the internal voltage
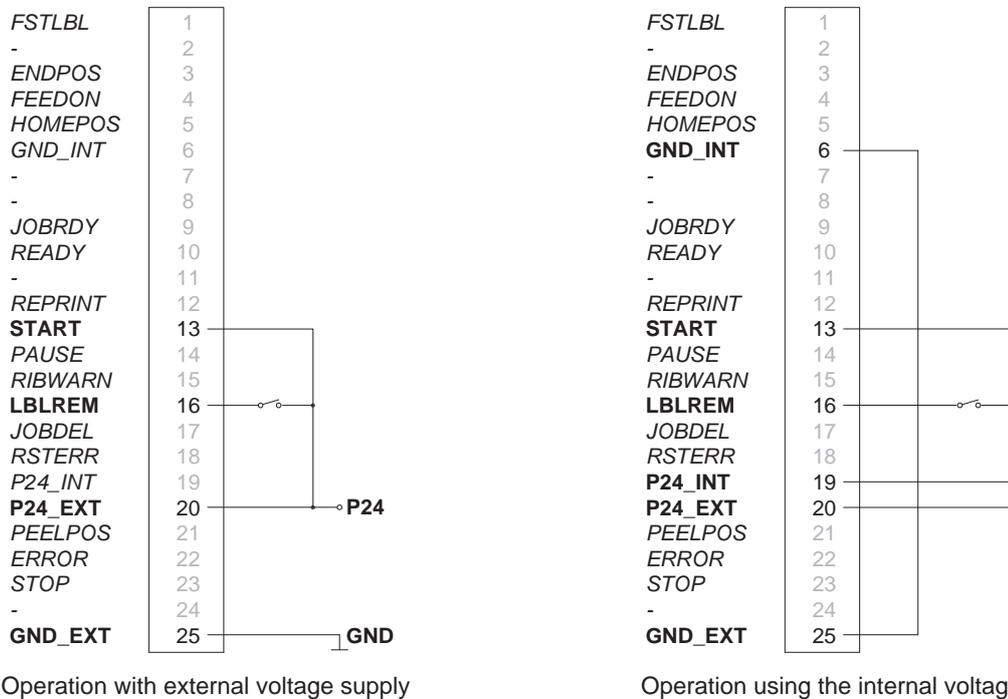
Figure 30   External circuit for peeling-off on demand without present sensor with switching signal LBLREM

Starting Print and Confirming Label Removal with Signal START

Requirements:

- Operation without present sensor.
- External circuit as shown in Figure 31
- Setting *Printing > Print on Demand = "On".*
- Setting *Interfaces > I/O > START mode = "Level".*
- Setting *Interfaces > I/O > Automatic LBLREM = "On".*

Operation:

▶ Send a print job.

▶ Activate **START** and hold it active.
  The first label will be printed an transported to the peel position.

▶ Remove the label.

▶ Confirm the label removal with deactivation of **START**.

▶ Activate **START** again to start the next cycle.

Operation with external voltage supply   Operation using the internal voltage

Figure 31   External circuit for peeling-off on demand without present sensor with switching signal START

12.3.3 Cutting on Demand with Cutter CU400

In the standard cut mode all labels of a print job will be printed and cut one after another without interruption.

Using the I/O interface the print job can be split into single steps with printing and cutting each one label.
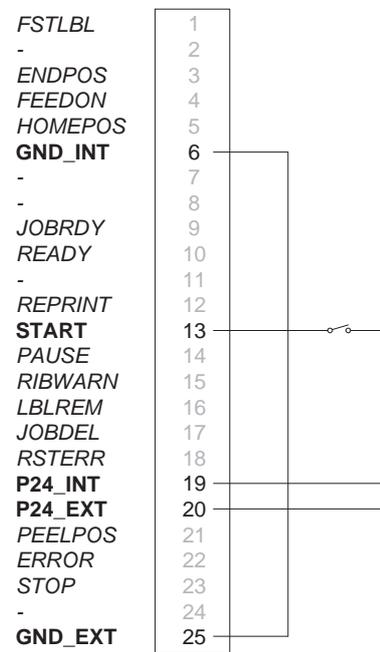
Requirements:

- Operation with Cutter CU400.
- External circuit as shown in Figure 32.
- Setting *Printing > Print on Demand = "On"*.

Operation:

▶ Send a print job.

▶ Activate **START**.
The first label will be printed and cut

▶ Activate **START** to start the next cycle.
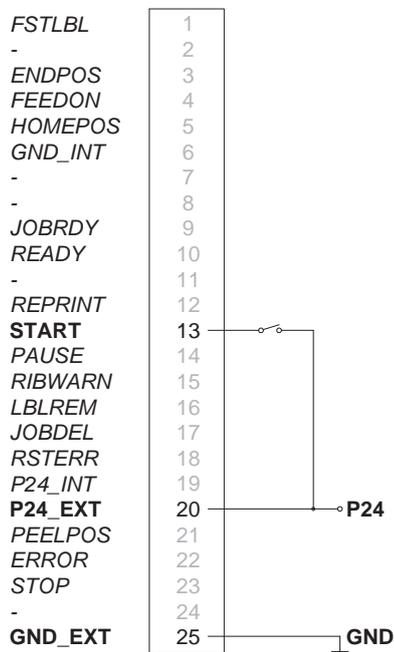
Operation with external voltage supply	Operation using the internal voltage

Figure 32   External circuit for cutting on demand with Cutter CU400

ⓘ Notes!

The function of the signal START can be released alternatively by pressing ▬▬ on the touchscreen display.

12.3.4   Pausing and Continuing a Print Job

In the standard operation without a peripheral device connected all labels of a print job will be printed without interruption.
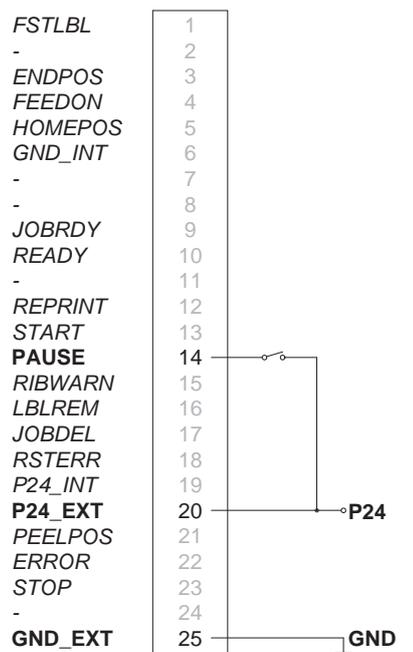
To adapt the label output of the printer e.g. to an external device with a lower transport speed the print job can be interrupted meanwhile.
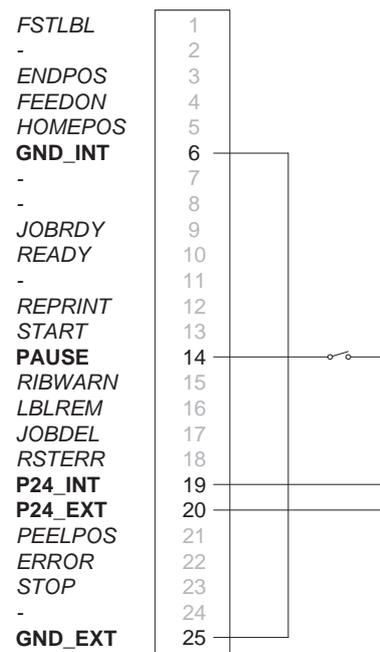
Requirements:

- Operation without peripheral device.
- External circuit as shown in Figure 33.
- Setting *Printing > Print on Demand = "Off"*.

Operation:

▶ Send a print job.
   The labels of the print job will be printed one after the other.
▶ Activate the signal **PAUSE**.
   After completion of the current label the print job will be paused.
▶ Deactivate the signal **PAUSE**.
   The print job will be continued.

FSTLBL	1		*FSTLBL*	1	
-	2		-	2	
ENDPOS	3		*ENDPOS*	3	
FEEDON	4		*FEEDON*	4	
HOMEPOS	5		*HOMEPOS*	5	
GND_INT	6		**GND_INT**	6	
-	7		-	7	
-	8		-	8	
JOBRDY	9		*JOBRDY*	9	
READY	10		*READY*	10	
-	11		-	11	
REPRINT	12		*REPRINT*	12	
START	13		*START*	13	
PAUSE	14		**PAUSE**	14	
RIBWARN	15		*RIBWARN*	15	
LBLREM	16		*LBLREM*	16	
JOBDEL	17		*JOBDEL*	17	
RSTERR	18		*RSTERR*	18	
P24_INT	19		**P24_INT**	19	
P24_EXT	20	**P24**	**P24_EXT**	20	
PEELPOS	21		*PEELPOS*	21	
ERROR	22		*ERROR*	22	
STOP	23		*STOP*	23	
-	24		-	24	
GND_EXT	25	**GND**	**GND_EXT**	25	

Operation with external voltage supply   Operation using the internal voltage

Figure 33   External circuit for pausing and continuing a print job

The File Transfer Protocol (FTP) allows to manage and transfer files on the network via the Ethernet interface or Wi-Fi adapter. An FTP program (FTP client) is required which supports the "binary" transfer mode to manage the printer. The printer functions as an FTP server.

FTP printer management is comprised of four functions:

• Direct printing via copying JScript or ZPL files.

• Management of the memory media installed in the label printer

• IFFS management

• Firmware update.

13.1 FTP Login

To establish an FTP connection, the client must be logged on to the server. The login type depends on the client. The following information must be specified in any case, however:

• IP address of the label printer

• User name and password

Access to the printer management functions depends on the user name:

Function	User name	Default password
FTP printing, loading PPP vouchers	ftpprint	print
FTP access to storage devices	ftpcard	card
FTP firmware update	ftpadmin	admin

Table 31   Default passwords

i   **Notice!**

▶ **The passwords can be changed in the "Setup" tab of the web interface ▷ page 27.**

After logging on the FTP server is accessible in a manner similar to a Windows folder.

13.2 FTP Printing

Label files in cab JScript format (▷ Programming Manual) or in ZPL format can be printed directly via FTP connection:

▶ Establish a FTP connection with the user name **ftpprint** and the defined password (Default: **print**)
An empty folder of the FTP server will be shown.

▶ Copy a label file in JScript or ZPL format to the folder of the FTP server.
Printing of the label file is started immediately. The corresponding file is deleted once the print job is complete.

▶ Close the FTP connection.

13.3 FTP Access to Storage Devices

FTP connection allows to manage data of a storage device:

▶ Establish a FTP connection with the user name **ftpcard** and the defined password (Default: **card**).
The content of the storage device will be shown. The files are separated into several subfolders.

▶ Manage the files as necessary. When copying files to the folder, type-based sorting occurs automatically in the subfolders.

▶ Close the FTP connection.

13.4   FTP Firmware Update

FTP allows to carry out a firmware update:

▶ Establish a FTP connection with the user name **ftpadmin** and the defined password (Default: **admin**).
An empty folder of the FTP server will be shown.

▶ Copy a valid firmware file (e.g. 500_6714.cfw) to the folder.
The status of the saving procedure is shown by a progress indicator in the display. The printer resets automatically after the update is carried out successfully.

▶ Close the FTP connection.

Whether the firmware update was carried out successfully can be checked on the "Status" tab of the web interface.

14 **Storage Devices**

Label descriptions, graphics, fonts, and database information can be saved for the long-term on memory media.

i **Notice!**
▶ **Always create a backup copy of external devices in case of a malfunction.**

14.1 Suitable Storage Devices

External Devices

• USB flash drive at USB master interface.
• SD cards

Internal Device

• approx. 50 MB flash memory inside the printer (Internal Flash File System IFFS)

14.2 Installation

∗ **For external storage devices only!**

▶ Slide SD card contact-side first into the matching slot until it latches.
To unlatch SD card press it shortly into the slot and remove it.
  or
▶ Connect USB flash drive to an USB master interface.

! **Attention!**
Risk of data loss !
▶ **Do not remove the storage device while it is being accessed.**

14.3 Directory Structure

On storage devices connected to the printer, the following directory structure is automatically generated when uploading files:

Folder name	Contents
fonts	Font files
images	Graphic files
labels	Label description files
misc	Firmware, PPP, Setup and TMP files

Table 32 Directory structure

14.4   Writing

The storage devices can be written to in several ways. The most functionally secure way is writing to the storage device via a data interface.

> **! Attention!**
> **The device selected as** *Default storage* **is written to by default. To write to another device specify the path name of the device in the file name (▷ Programming Manual).**

Example:

With direct programming, the command sequence for saving a label (file XYZ) has the following form:

Ms LBL; XYZ	Command for saving the file **XYZ**
J	|
H 100,0,T	|
S l1;0,0,68,71,104	| Contents of the file **XYZ**
T 10,10,0,3,pt15;memory card	|
A 1[NOPRINT]	|
Ms LBL	End of save command

- After transfer of the command sequence, the file XYZ is saved with the commands from J to A.
- Only one label is printed each time the file XYZ is called up.
- The [NOPRINT] parameter in command A suppresses the printing of a label when the file is saved.
- To print the label a variable number of times, use command A [?].

14.5   Storage Device Functions

14.5.1   Load Label

Labels whose descriptions are saved on the storage device can be printed using the *Load label* function.

▶ Start menu.

▶ Select *Storage > Load label*.
The display shows the selection of external storage devices and the label files stored on the devices.

▶ Select a label and confirm with ✔ .
If a label is selected which was saved with a fixed contents and fixed label quantity, the print job is started immediately.
If additional input on the label description is required, the display requests to enter the variable data.
For label descriptions with a variable label quantity, a prompt to enter the label quantity is displayed.

▶ Enter the label quantity/variable data and select ✔ to start the print job.

14.5.2   Print File List

The *Print file list* function creates a list of the files stored on the default storage device.

▶ Insert printable medium (labels, endless paper) which extends across the entire printing width.

▶ If the printout is to occur using thermal transfer printing, insert transfer ribbon with the maximum width.

▶ Start menu.

▶ Select *Storage > Print file list*
The display shows the selection of storage devices

▶ Select a storage device and confirm with ✔ .
The directory of the storage device will be printed.

Contents of the printout:

• the name of the storage device

• information on the saved files

• the size of the available memory area

14.5.3   Copy Files

With the *Copy files* function files can be copied from one to another storage devices.

▶ Insert the storage devices.

▶ Start menu.

▶ Select *Storage > Copy files*.
Under the headline *Source* the selection of storage devices will be shown.

▶ Select source device.

▶ Select a folder.

▶ Select files. One single file or all files (*.*) of the folder can be selected.

▶ Confirm the selection with ➡ .
Under the headline *Destination* the selection of storage devices will be shown again.

▶ Select destination device and folder.

▶ Confirm the selection with ✔.
The files are copied. The display shows the message "*Copied ... file(s) to [Destination]*"

▶ Select *Continue* to return to the *Storage* menu.

14.5.4   Format Storage

The *Format* function can be used to delete all data from a storage device. This reformats the storage device. So you can also use the *Format* function if the *Unknown card* error message appears when using the device.

▶ Insert storage device

▶ Start menu.

▶ Select *Storage > Format storage*.
If the function is protected via a PIN a prompt appears in the display. Enter the code number and confirm with *OK*.
The display shows the selection of storage devices.

▶ Select a storage device and confirm the selection with ✔ .
The display shows the message *All data on the selected device will be lost.*

▶ Select *Continue*. The storage device will be formatted.
Do not remove the device from the printer during the deleting procedure.
The printer returns to the *Storage* menu.

14.5.5   Default Storage

With the parameter *Default storage* Definition the storage device can be defined, which can be operated via interfaces and FTP printer management.

At functions started from the printer display all storage devices are accessible, but the default storage will be offered first.

▶ Start menu.

▶ Select *Storage > Default storage.*
   The display shows the selection of storage devices.

▶ Select a storage device and confirm the selection with ✔ .

> **!** **Attention!**
> **For the remote access via VNC the firmware version 5.03 or later must be installed.**

VNC is a software that allows remote control of a printer's operation control panel (server) via a computer (client) through input devices like keyboard and mouse.

VNC ist not platform dependent and enables the use of a Windows computer as well as a mobile Android or iOS system as an external remote control. The prerequisite for this is the installation of a VNC client on the system used.

Preparing the Computer

▶ Install the VNC client on the computer.

Preparing the Printer

▶ Activate the VNC server under *Setup > Interfaces > Network services > VNC server*.
▶ Enter password *vnc* under *Security > Password VNC*.

For Wireless Access:

▶ Activate Wi-Fi under *Setup > Interfaces > Wi-Fi > Wi-Fi*.
▶ Find out the Wi-Fi-IP-Address under *Info*.

For Ethernet Access:

▶ Find out the Ethernet-IP-Address under *Info*.

Establishing a Connection

▶ Start the VNC client on the computer.
▶ Enter the IP address and password *vnc* in the configuration of the VNC client.
▶ Activate the connection.
   The menu of the printer will be visible and usable vie mouse click, keyboard or touch-pad just like on the printer itself.

An external keyboard or a compatible input device (e.g. barcode scanner) can be connected directly to the printer. Using an external keyboard facilitates the entry of variable data while processing print jobs and printing from storage devices.

Input prompts and the data received from the keyboard are shown in the display.

16.1   Connecting External Keyboard

Any HID compatible USB keyboard can be connected to the printer.

▶   Insert connection cable of the keyboard into a USB master interface of the printer.

16.2   Keyboard Assignment

▶   If necessary set the parameter *Setup > Region > Keyboard* matching to the used keyboard.

ℹ   **Notice!**
▶   **If the parameter** *Keyboard* **is set to** *Automatic***, the keyboard assignment will be defined by the setting of the parameter** *Country***.**

The following *Country* settings have special keyboard assignment :

Country	Keyboard
China	USA
South Africa	USA
Taiwan	USA
Mexico	Latin America
Egypt	Arabic

Table 33   Special assignments *Country* - *Keyboard*

For the following *Keyboard* settings can be switched between two assignments by pressing the CTRL key and the SHIFT key:

Keyboard	First assignment	Second assignment
Bulgaria	Latin	Cyrillic
Greece	Latin	Greek
Iran	Latin	Persian
Macedonia	Latin	Cyrillic
Russia	Latin	Cyrillic
Thailand	Latin	Thai
Arabic	Latin	Arabic

Table 34   *Keyboard* settings with double assignment

16.3   Special Key Functions

General :

[F1]	Executes the *Load label* storage device function.
[F2]	Prints an additional label from the last print job. Corresponds to .
[F3]	Repeats the last print job with renewed polling of the variable data and polling of the label quantity.
[F8]	Functions like .
[Enter]	Starts menu
[Esc]	Functions like .
[Space]	Functions like .

Table 35   Special key functions: general

In the menu and for entry of variable data:

[Enter]	Confirms the input.
[Esc]	Cancels the input and returns.
[Shift][Entf]	Clears the input line.

Table 36   Special key functions: Menu and data input

Attention!
When using a scanner operated as keyboard emulation ensure that the same character set is set for both the scanner and the printer.

The cabFirmwareUpdater, which can be downloaded free of charge from the cab Website, offers an easy way to transfer firmware files from the computer to the printer.

Figure 34   cabFirmwareUpdater

With the cabFirmwareUpdater it is possible to start a firmware update via USB, Ethernet or serial interface :

1. Start the cabFirmwareUpdater.
2. Select the printer model.
3. Select the interface (Port).
4. Choose "Firmware".
5. Locate the firmware file and select it.
6. Click "Update".
   The selected file will be uploaded to the printer. The firmware update will be started automatically.