



PX Series Print Module

Made in Germany

PX print modules

Our goals are:

Perfect function, high reliability, easy to handle operation and less maintenance downtime.
 The PX print module is designed especially for the fully automatic print and apply operation in the industrial use. It can be integrated in each orientation and used for complex labeling applications.



A solid cast aluminum design is base for the assembly of all components of the printing mechanics. A food safe coating and stainless steel covers make the PX print module perfect with outstanding features. It is bolt compatible with competitive print modules.

The Universal

The industrial module for precise printing.

1.1	Print module	PX4			PX 4.3*	
	Print resolution dpi	203	300	600	203	300
	Print width up to mm	104	105,6	105,6	104	108,4
	Print speed up to mm/s	300	250	100	200	150

*4.3 preferably for thermal direct printing.

The Wide

Focused on Odette and UCC labels.

1.2	Print module	PX6	
	Print resolution dpi	203	300
	Print width up to mm	168	162,6
	Print speed up to mm/s	200	200

Label peeling direction

Print module PX „L“



left hand version

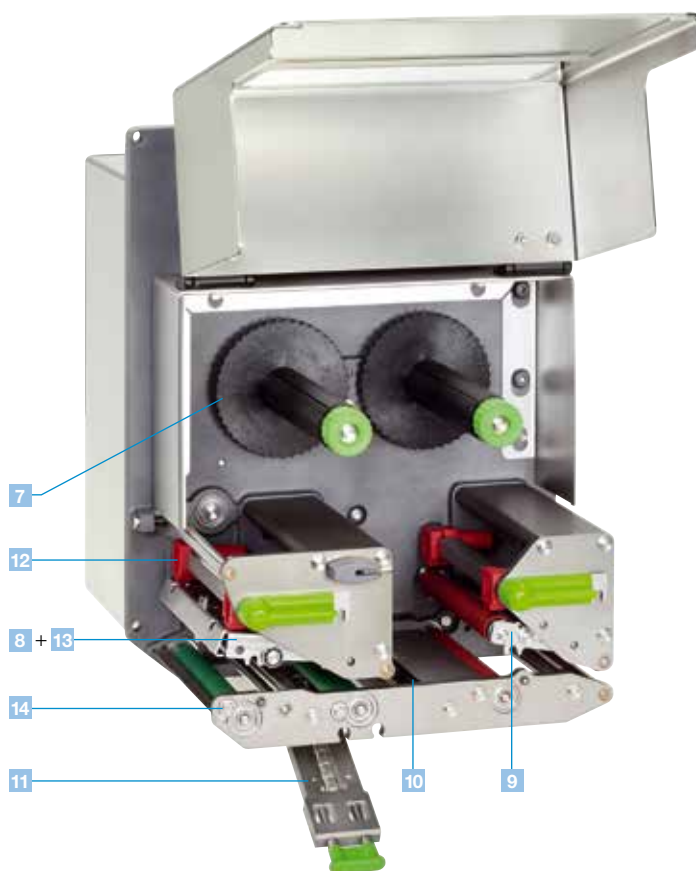
Print module PX „R“



right hand version

All PX print modules are available in right and left hand versions and different resolutions.

Technical details



1 Big graphic display

White backlight for optimum readability.

2 Navigator pad

With illuminated lettering for interactive menu navigation.

3 CF memory card

Slot for CF memory card for storage of label formats, fonts, texts, graphics, programs or databases.

4 USB slot

Additional USB slot for service keys, keyboard, scanner or USB memory.

5 Power switch

Attached to the front for easier handling.

6 Solid metal cover

Made of die-cast aluminum with antibacterial coating. All casings are made of stainless steel.

7 Ribbon rewinder and unwinder

The three-part tightening axles enable fast and easy ribbon exchange. Narrow ribbons can be fixed in any position.

8 Ribbon saver

Used for labels that are only to be partially printed. During label feed the printhead is lifted in the blank area and the ribbon is stopped.

9 Back-feed

Once a label has been dispensed, the next one can be fed back behind the print line to ensure it can be printed right to the edge and to prevent the liner from leaking adhesive during a longer pause. With very sensitive materials and to avoid ribbon folds, the printhead can be raised during this process.

10 Label sensor

The gap or reflective sensor ensures the label is positioned precisely and identifies the end of the material – independent of gaps.

11 Simple material replacement

The label material is inserted edgewise up to the end position. The printhead and pressure roller are locked with locking levers.

12 Adjustment of the print layout

The pressure can be adjusted easily by moving the plungers.

13 Fast printhead exchange

The printhead can be exchanged and adjusted easily using the Allen key, which is ready to hand at the machine.

14 Removing the print roller

The print roller can be easily removed for cleaning or replacement.

Technical data

■ Standard □ Option ○ Authorized distribution by resellers

Print module		PX4			PX4.3 ²⁾		PX6	
Printhead								
Printing method		Thermal transfer / Thermal direct						
Print resolution dpi		203	300	600	203	300	203	300
Print speed up to mm / s		300	250	100	200	150	200	200
Print width up to mm		104	105,6	105,6	104	108,4	168	162,6
Material								
Labels, continuous rolls or fan-folded		Paper, cardboard, textiles, plastics such as PET, PE, PP, PI, PVC, PU, Acrylat						
Thickness mm / weight g/m²		0,055 - 0,35 / 60 - 160						
Label width ¹⁾ mm		10 - 116					50 - 174	
Width of carrier ¹⁾ mm		25 - 120					50 - 178	
Label height ¹⁾	min. mm without back-feed	6	6	6	6	6	12	12
	min. mm when dispensing ¹⁾	12	12	12	12	12	25	25
	max. mm	5000	4000	1000	5000	4000	4000	3000
Ribbon								
Ink		Outside or inside						
Roll diamter up to mm		86						
Core diameter mm		25						
Ribbon length variable up to m		600						
Width ³⁾ up to mm		114						165
Ribbon saver		☐						
Label sensor								
Gap sensor		For leading edge of the label or punching marks and end of material						
Reflective sensor from the botton		For printing marks						
Distance to locating edge mm		4 - 60						
Electronics								
Processor high speed 32 Bit ColdFire / speed MHz		266						
RAM MB		64						
Menory IFFS MB Flash		8						
Slot for CompactFlash Type I		■						
Slot for wireless LAN card		■						
Real-time clock, printout of date and time		■						
Interfaces								
Centronics bidirectional acc. to IEEE 1284		☐						
RS232 C 1,200 to 230,400 Baud / 8 Bit		■						
USB 2.0 high speed slave for PC connection		■						
Ethernet 10 / 100 Base T, LPD, RawIP printing, ftp printing, DHCP, HTTP, FTP, SMTP, SNMP, TIME, Zeroconf, mDNS, SOAP		■						
RS422, RS485 1.200 up to 230.400 Baud / 8 Bit		☐						
WLAN card 802.11b / g WEP / WPA PSK (TKIP)		☐						
Wireless Bridge 802.11b		☐						
2x USB master for external operation panel, keyboard, scanner or service key, USB flash drive		■						
Digital I/O interface (cab other OEM version)		■						
Operating data								
Power supply		100 - 240 V ~ 50 / 60 Hz, PFC						
Energy consumption		max. 250 W						
Operating temperature / Humidity	Operation:	+ 5 - 40°C / 10 - 85% not condensing						
	Stock:	+ 0 - 60°C / 20 - 80% not condensing						
	Transport:	– 25 - 60°C / 20 - 80% not condensing						
Approvals		CE, FCC class A, CB, CCC, UL						
Operation panel								
Buttons / LED display		Pause, Feed, Cancel, Menu, Enter, 4 x Cursor						
LCD graphic display		Text 4 lines, ca. 20 characters per line						
Width x Height mm		60 x 40						
Settings								
		Digital or analog clock	Print parameters		Interfaces		Time	
		System settings	24 language settings		Security		Date	
Monitoring								
Stop printing if:		End of ribbon End of label Printhead open						
On the display		Data reception WLAN field intensity Ethernet status	Used memory Temperature of printhead Access to memory card		Clock Date sheet abc Debug		Input buffer Remaining quantity of ribbon	

¹⁾ Limitations may apply to small labels, thin materials or strong adhesives. Critical materials or applications must be tested and approved.

²⁾ Preferred for thermal transfer printing.

³⁾ The ribbon should be roughly the same width as the label in order to avoid folding.

Technical data

Test routines	
System diagnosis	When switched on, incl. printhead testing
Short status, status print	Font list, device list, WLAN status, profile of label, test grid, monitor mode, PPP status
Status reports	Extensive status printout with information about setting, e.g. print length counter, runtime counter etc. Request of machine status via software command. Detailed status messages on the display, e.g. network error – no link, barcode error, etc..
Fonts	
Font types	5 Bitmap fonts incl. OCR-A, OCR-B and 3 Vector fonts Swiss 721, Swiss 721 Bold and Monospace 821 available internally, loadable TrueType fonts. Thai and Chinese (simplified Chinese) available as options.
Character sets	Windows 1250 up to 1257, DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869, EBC DIC 500, ISO 8859-1 to -10 and -13 up to -16, WinOEM 720, UTF-8, Macintosh Roman, DEC MCS, KOI8-R. All West and East European Latin, Cyrillic, Greek, Hebrew and Arabic characters are supported. Thai and Chinese available as options.
Bitmap fonts	Size of width and height 1 – 3 mm Zoom 2-10 Orientation 0°, 90°, 180°, 270°
Vector / TrueType fonts	Size of width and height 0.9 – 128 mm Variable zoom, Orientation 360° in steps of 1°
Font formats	Bold, italic, underlined, outline, negative, vertical, depending on character fonts
Font width	Variable
Graphics	
Graphic elements	Line, arrow, box, circle, ellipse, filled and filled with fading
Grafikformate	PCX, IMG, BMP, TIF, MAC, GIF, PNG

Barcodes			
Linear barcodes	Code 39, Code 93	Interleaved 2 / 5	
	Code 39 Full ASCII	Ident- u. Leitcode der Deutschen Post AG	
	Code 128 A, B, C	Codabar	
	EAN 8, 13	JAN 8, 13	
	EAN / UCC 128	MSI	
	EAN / UPC Appendix 2	Plessey	
	EAN / UPC Appendix 5	Postnet	
	FIM	RSS 14	
	HIBC	UPC A, E, E0	
2D codes	Aztec, Codablock F, Data Matrix, PDF 417, Micro PDF 417, UPS Maxicode, QR-Code, RSS 14 truncated, limited, stacked and stacked omnidirectional, EAN-Datamatrix, GS1 Data Bar		
	All codes variable in height, module width and ratio. Orientation 0°, 90°, 180°, 270°. Optionally with check digit, printed characters and start/stop code, depending on code type.		
Software			
Programming	J-Script direct programming abc-Basic Compiler Database Connector SAP Replace method		■ ■ ■ ■
System diagnosis / administration	Printer monitoring with Intra- and Internet with web interface Network Manager		■ ■
Label software	cablabel® S3 Lite cablabel® S3 Viewer cablabel® S3 Pro		■ ■ □
Windows driver 32 / 64 bit certified for	Windows Vista Windows 7 Windows 8 Windows 8.1 Windows 10	Server 2003 Server 2008 Server 2008 R2 Server 2012 Server 2012 R2	■
Mac driver	OS X printer driver from version 10.6		■
Linux driver	CUPS-based from version 1.2		■
Stand-alone-operation			■

Interfaces



- 1 RS232C interface
- 2 USB 2.0 slave interface
- 3 Ethernet 10/100 Base T interface with TCP/IP
- 4 Slot for wireless LAN card
- 5 Two USB master interfaces for connecting an external operation panel, keyboard, scanner or service key
- 6 Slot for CompactFlash Type I memory card

- 7 Digital I/O interface
25-pin SUB D socket
Each of the 24V inputs and outputs are electrically isolated
Inputs
 Label feed
 Repeat print run
 Start printing
 Pause
 Label dispensed
 Cancel re-set with memory
 Cancel re-set without memory
Outputs
 Warning if end of ribbon
 Warning if end of label
 Paper feed ON
 Print start
 Error end of ribbon
 Error end of label
 Print data available
 Operating status
 Label in dispensing position
 Error printer
- 8 OEM – digital I/O interface
15-pin SUB D socket
Each of the 5V inputs and outputs are electrically isolated
Inputs
 Label feed
 Repeat print run
 Start printing
 Cancel reset without memory
Outputs
 Warning if end of ribbon
 Paper feed ON
 Error end of ribbon
 Error end of label
 Print data available
 Label in dispensing position
 Error printer

Accessories for all models

Extras	
2.1	 External panel Connected via USB interface. Both panels provide the same functionality.
2.2	 Interface cover Protects the interfaces against humidity and contamination.
2.3	 25-pin SUB D interface connector With screw clamps for the cable connection.
2.4	 15-pin SUB D interface connector With screw clamps for the cable connection.
2.5	 Memory card CompactFlash Type I
2.6	 Standard keyboard USB German Version
Interfaces	
3.1	 Centronics interface bidirektional nach IEEE 1284
3.2	 Interface RS422/RS485 1.200 up to 230.400 Baud/8 Bit
3.3	 Label selection box – I/O box From a higher-level control, like a PLC, up to 16 different labels can be selected from the memory card. The I/O box enables via abc programming to realize easy programming of the PLC with the 4 in- and outputs.
3.4	 WLAN card 802.11 b/g
Connecting cable	
4.1	 Connecting cable RS232 C 9/9 pin, length 3 m
4.2	 Patch cable KAT 5e, 3 m grau



Device functionality and compliance with CE standards are only warranted by using the accessories provided or recommended by cab.

Label software cablabel® S3

11.9



In cablabel® S3 cab concentrates label design, print control and monitoring of all cab marking systems and synchronizes the development of devices and software.

Highlights

cablabel® S3 opens full potential of cab devices like no other available software does: the software provides JScript instruction set to the full extend. The Pro product imports already existing JScript files, so you can switch over to the new software without wasting time. With the new layer technology the user designs a label with the data for all established devices and resolutions. The intelligent print control evaluates onto which device and with which resolution the label has to be printed and sends adequate data. This reduces possible sources of error.

Simultaneously cablabel® S3 maximizes the integration database connections via Database Connector. After designing, the software provides all files that are stored within the printer for data base connections. And, if you want your marking system to print independently from a host system in the stand alone mode, cablabel® S3 supports this in the same way. Additionally, the software creates interfaces that are easy to handle for the connection to SAP or other devices like SPC, scales or bar code tester.

Products

Companies structure label printing differently. For example, creation and production are executed by different employees. To adopt the software package to your company cab offers different products.

cablabel® S3 Lite is delivered free of costs with every cab printer and allows you to create and print labels.

With cost-saving cablabel® S3 Pro you create label designs for professional technical solutions.

cablabel® S3 Viewer shows the preview of a label in the Windows Explorer and is delivered free of costs with every cablabel® S3. The Viewer may support you for example in approval processes or supplier requirements.

cablabel® S3 Print is provided for users in production or warehousing. The user interface is simplified and makes only those functions available which are required for label printing. Other products like cablabel® S3 Pro Laser, Print Laser und Print Server are in preparation.

Integration



No printer is isolated – in a productive environment it is connected to other equipment or networks for control and monitoring. cab offers various possibilities to integrate the printer into your environment.

Control

Every cab printer can be directly coded with the simple programming language *JScript* and an extensive instruction set. The label software *cablabel® S3* supports optimally *JScript*, but a *JScript* program may also be created with any text editor.

As an integrated element of the firmware, the *abc Basic compiler* enables the printer to process data via BASIC programming before it is sent for print editing. That way, you replace external printer languages or integrate data from other systems, e.g. balance or a PLC.

11.4 In the stand-alone mode with additional network connection, the *Database Connector* enables printers to access data directly from a central ODBC-, OLEDB compatible database and to print it as a label.

In cooperation with SAP* cab developed the so-called *replace method* to control cab printers quickly and easily from SAPScript using SAP R/3. Using the replace method the host computer only sends the *JScript* variable, respectively changed data to the printer. As a Silver Level partner in SAP's Printer Vendor Program, cab has access to the SAP development area for optimum printer support in SAP environments.

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11.10 The *Programmer's guide* explains and describes commands for different printer models via direct programming with *JScript* and *abc* and additionally the connection of the printer to databases via *Database Connector*.

For the printer control via PC accredited drivers are available for established Windows operating systems and additionally CUPS-based drivers for Mac OS X and Linux. The drivers ensure optimal stability on your operating system.

Monitoring

Using standard programs such as the web browser or FTP clients, the integrated HTTP and FTP server enables print monitoring, configuration, firmware updates and memory card administration. Status, warning and error messages are sent to administrators or users as e-mails or SNMP datagrams via SNMP and SMTP clients. A time server is used to synchronize time and date.

11.6 The cab Network Manager enables the user to control a number of printers across a network simultaneously. It supports monitoring, configuration, firmware updates, memory card administration, file synchronization and PIN administration centrally.



Stand-alone operation

Printing without PC

Stand-alone operation is the ability to print labels even if the printer is not connected to the host system.

The label layout is designed with the label software cablabel S3 or direct programming via PC.

Label formats, fonts, font-, text- and graphics data as well as data base contents are saved on the USB stick or read on the internal data memory IFFS.

Only variable data to be printed is sent to the printer via keyboard or scanner.



Easy maintenance

Printhead 203 / 300 / 600 dpi

The printhead can be exchanged and adjusted easily using the Allen key, which is ready to hand at the machine.

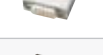


Removing the print roller

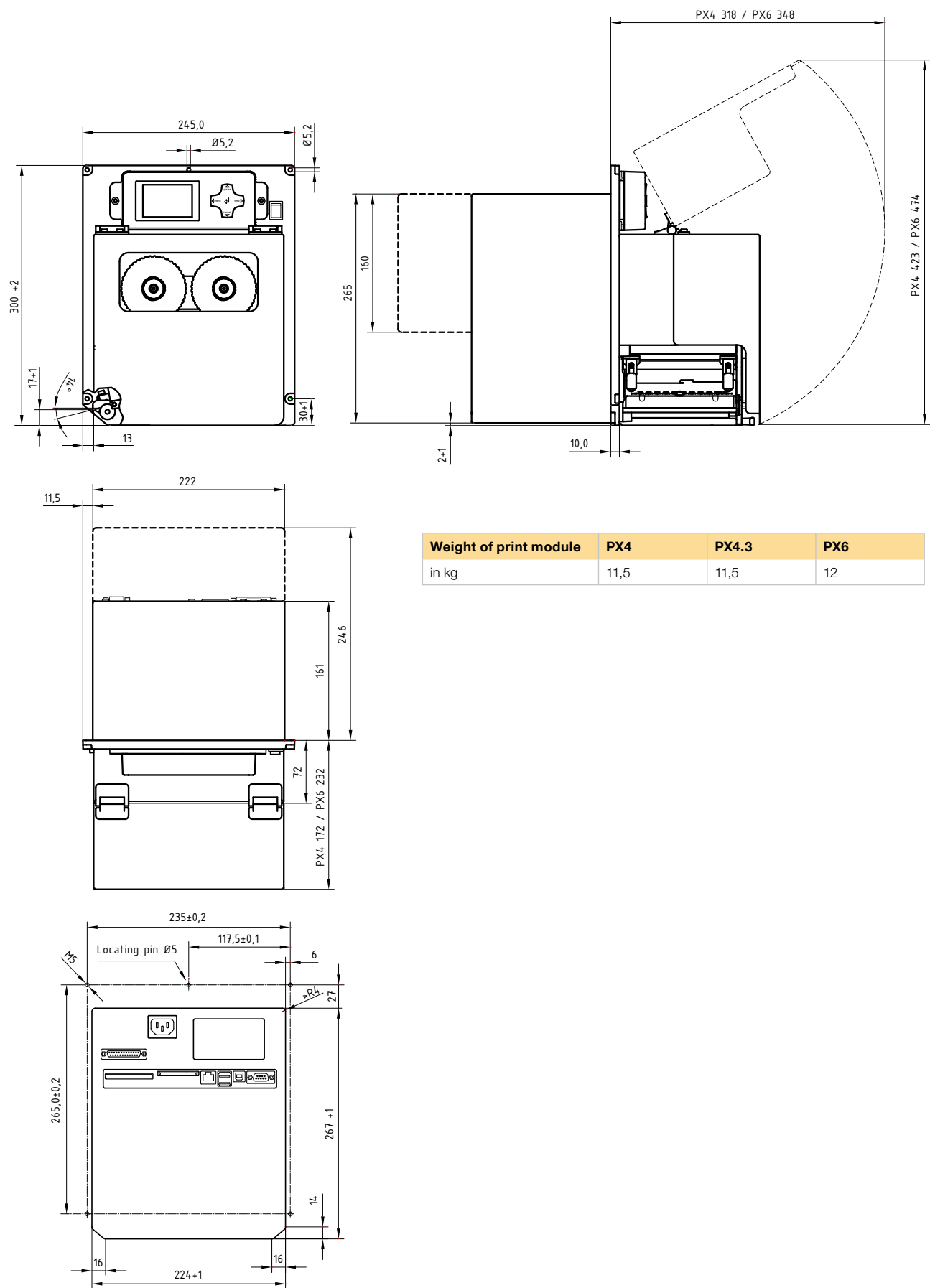
The print roller can be easily removed for cleaning or replacement.

Delivery program for the PX print module

	Part no.	Hardware	dpi
1.1		5956102.xxx Print module PX4L / 200 5956103.xxx Print module PX4L / 300 5956106.xxx Print module PX4L / 600 5956142.xxx Print module PX4.3L / 200 5956143.xxx Print module PX4.3L / 300	
		5956112.xxx Print module PX4R / 200 5956113.xxx Print module PX4R / 300 5956116.xxx Print module PX4R / 600 5956152.xxx Print module PX4.3R / 200 5956153.xxx Print module PX4.3R / 300	
		5956235.xxx Print module PX6L / 200 5956123.xxx Print module PX6L / 300	
		5956236.xxx Print module PX6R / 200 5956133.xxx Print module PX6R / 300	
		Part no.	Hardware optionen
		595.xxx.201	Digital I/O interface
1.2		595.xxx.202	Digital I/O interface Ribbon saver
		595.xxx.203	OEM – Digital I/O interface
		595.xxx.204	OEM – Digital I/O interface Ribbon saver
Scope of delivery			
PX print module as label printer, Power cable type E+F, length 1.8 m, Connecting cables USB, length 1.8 m Operating manual de/en DVD: Operating manual de/en/fr, Configuration manual de/en/fr, Service manual de/en, Spare parts list de/en, Programming manual en, Windows printer driver 32/64 bit in 19 languages for Windows Vista Server 2003 Windows 7 Server 2008 Windows 8 Server 2008 R2 Windows 8.1 Server 2012 Windows 10 Server 2012 R2 Label software cablabel® S3 Lite and Viewer Database Connector en (without license)			
	Part no.	Consumables	
	5956381.001	Printhead 4 / 203	
	5956382.001	Printhead 4 / 300	
	5956383.001	Printhead 4 / 600	
	5956385.001	Printhead 4.3 / 200	
	5956384.001	Printhead 4.3 / 300	
	5954217.001	Printhead 6 / 200	
	5954217.001	Printhead 6 / 300	
	5954180.001	Print roller DR4	
	5954245.001	Print roller DR6	

	Part no.	Accessories
2.1	 5954380	External operation panel
2.2	 5965040	Interface cover
2.3	 5917651	Interface connector 25-pin SUB D with screw clamps for cable connection
2.4	 5917652	Interface connector 15-pin SUB D with screw clamps for cable connection
2.5	 5561043	CompactFlash Type I memory card
2.6	 5901626	Compact keyboard USB Cherry G84-4100
	Part no.	Interfaces
3.1	 5954200	Centronics interface
3.2	 5954201	RS422 / RS485 interface
3.3	 5954191	Label selection box – I/O box
3.4	 5561041	WLAN card 802.11 b/g
	Part no.	Connecting cable
4.1	 5550818	Connecting cable RS232 C 9/9 pin, length 3 m
4.2	 5918008	Patch cable KAT 5e, 3 m gray
	Part no.	Software
11.9	 5588000	Label software cablabel® S3 Lite
	5588001	cablabel® S3 Pro 1 WS
	5588100	cablabel® S3 Pro 5 WS
	5588101	cablabel® S3 Pro 10 WS
	5588150	cablabel® S3 Pro 1 additional licence
	5588151	cablabel® S3 Pro 4 additional licences
	5588152	cablabel® S3 Pro 9 additional licences
	5588002	cablabel® S3 Print 1 WS
	5588105	cablabel® S3 Print 5 WS
	5588106	cablabel® S3 Print 10 WS
11.10	5588155	cablabel® S3 Print 1 additional licence
	5588156	cablabel® S3 Print 4 additional licences
	5588157	cablabel® S3 Print 9 additional licences
	In preparation	cablabel® S3 Print Server
	9008486	Programming manual english, printed copy

Dimensions



Weight of print module	PX4	PX4.3	PX6
in kg	11,5	11,5	12

cab delivery program

Label printer EOS1

The compact one for label rolls up to 155 mm diameter



Label printer EOS4

The cost-effective one for label rolls up to 210 mm diameter



Label printer EOS mobile

Both EOS sizes with battery pack for mobile print



Label printers A+ series

The universal ones



Label printer A4+M

With centered material positioning



Label printer A4+T

With centered material positioning also for textile materials



Label printer XD4T

Double-sided printing



Label printers XC series

Two-color printing



Label dispensers HS/VS

Precise horizontal or vertical dispensing up to 180 mm width



Print & apply system Hermes+

For automation



Print & apply system Hermes C

For two-color printing and applying



Print modules PX series

For integration into automatic labeling systems



Consumables

Precise printing with cab labels and ribbons



Label software cablabel S3

Standard and optional



Laser marking system FL+ series

Precise and fast



Laser safety housing

The industrial solution



① Headquarter and fabrication
in Germany

② to ⑥ International
subsidiaries

There are furthermore 820
distribution partners in more
than 80 countries.



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