

Status: 05/2020



Products need labeling
Print modules
for industrial use

PX Q

Made in Germany

Please note: PX was discontinued on March 31, 2020. Manufacture has been switched step by step to PX Q. Orders for PX modules are accepted until July 31, 2020. Repairs of PX are guaranteed at least until December 2026, so are spare parts deliveries.

Print modules PX Q

Full functionality, high reliability, comfortable operation and low downtime related to maintenance! The PX Q print and peel-off module has been designed specifically for printing and labeling fully automatically in industrial applications. It can be integrated in any orientation of assembly to solve even complex marking tasks.

A torsion-resistant cast aluminum construction is basis to assemble all the components of the print mechanics. Food-safe coating and stainless steel casings add to the perfect shape with special features. Screwing is compatible to the devices of competitors.



The universal one

Industrial device for accurate imprint

Print module		PX Q4.3		PX Q4	
Printable resolution	dpi	203	300	300	600
Print speed	up to mm/s	300	300	300	150
Print width	up to mm	104	108.4	105.7	105.7



The wide one

Suitable for Odette and UCC labels

Print module		PX Q6.3	
Printable resolution	dpi	203	300
Print speed	up to mm/s	250	250
Print width	up to mm	168	162.6

Directions of label transfer



All the print modules are provided as left-hand and right-hand versions. As for printable resolutions, PX Q users can choose from 300 and 600 dpi, the PX Q4.3 and PX Q6.3. offer 203 and 300 dpi.

Details



1 Operation panel

Operating the device is intuitive and simple with the help of self-explanatory symbols to configure settings

2 Ribbon holder

Three-part tightening axles enable the ribbon to be replaced quickly and easily.

3 Rugged metal chassis

made of cast aluminum; basis to assemble all units

4 Plungers

One plunger is fixed on the inner side. A second one is moved that far to the label margin, until a good print image evokes.

5 Print head

All print heads are freely interchangeable at equal width. Easy replacement

6 Automatic ribbon saving (option)

The print head is lifted during label feed and the ribbon is stopped.

7 Print roller removal

It can be easily removed or inserted in the cases of cleaning or wear.

8 Simple replacement of materials

Label materials are inserted until lateral stop. The print head and wipe-down rollers are locked by levers.

9 Label sensor

A gap sensor or a reflective sensor position the imprint precisely on the label and detect the end of the material.

10 Material backfeed







After a label has been peeled off, the next one can be retracted to behind the print line. By this, the whole label can be printed and adhesive leaking is avoided during a longer pause. In case sensitive materials are processed and to prevent the ribbon from wrinkling, the print head can be lifted.

Imprint accuracy

The smaller a label, the higher are the requirements on the imprint accuracy. With the help of the adjustable slip correction, print offset can be reduced by ± 0.2 mm.

Operation panel

Operating the device is intuitive and simple with the help of self-explanatory symbols to configure settings.

- 1 **LED signal:** Power ON
- 1 **Status bar:** data reception, record data stream, ribbon pre-warning, SD memory card / USB memory stick plugged in, Bluetooth, WLAN, Ethernet, USB slave, time
- 3 **Printer status:** Ready, Pause, number of labels printed in a print job, label in peel-off position, awaiting external start signal
- 4 **USB slot** to connect the Service Key or a memory stick, in order to transfer data to the IFFS memory
- 5 **Operation**
 -  Print label
 -  Jump to menu
 -  Reprint last label
 -  Interrupt and continue print job
 -  Stop and delete all print jobs
 -  Label feed



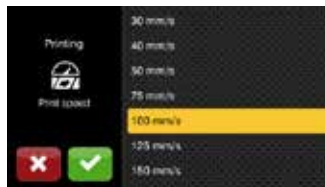
Setup options



Print parameters



Print position Y



Print speeds

Depending from the orientation of assembly, display is either in landscape or portrait mode.



Printer rotated by 90°



Video tutorials

External operation panel

providing the same functionality as on the printer

Display in landscape or portrait mode

Users are free to choose whether to operate the printer on the external panel or on the one integrated in the device.

Printer connection: USB 2.0 Hi-speed device

- 1 **LED signal:** Power ON
- 2 **USB slot** to connect the Service Key or a memory stick, in order to transfer data to the IFFS memory
- 3 **Connecting cable USB**, lengths 1.8 to 16 m
If length succeeds 3 m, use only specified cables.
For dimensions see assembly instructions



Print heads



All print heads are freely interchangeable at equal width. They are automatically detected and calibrated by the CPU. The print distance to the locating edge can be adjusted.

Major data such as running performance, maximum operating temperature and heat energy are directly stored in the print head. The data can be read at the plant.

Print heads for print module PX Q4 - 300, 600 dpi

providing sharp-edged print images
suitable for small fonts and graphics on typeplates
suitable for markings on materials with high energy needs

Print heads for print modules PX Q4.3 and PX Q6.3 - 203, 300 dpi

durable; suitable for rough surroundings and thermal direct printing

Print rollers



Two types of material:

Print rollers DR

Coating: synthetic rubber
They suit for highly accurate imprint and are provided as standard.

Print rollers DRS

Coating: silicone
They have an extra long service life at a higher imprint tolerance.

Interfaces

- 1 to connect a **SD memory card**
- 2 **2 x USB Host** to connect a Service Key, USB memory stick, keyboard, USB Bluetooth adapter, USB WLAN stick, an external operation panel
- 3 **USB 2.0 Hi-speed device** to connect a PC
- 4 **Ethernet 10/100 Mbit/s**
- 5 **RS232C** 1,200 to 230,400 baud/8 bit



Digital I/O interfaces; compliant with IEC/EN 61131-2, type 1+3
All inputs and outputs are galvanically isolated and protect from reverse polarity. In addition, outputs are short circuit protected.

6 Digital I/O interface 24 VDC; 25 pin SUB-D socket connector

Inputs PNP

Label feed
Reprint
Start printing
Pause
Label removed
Reset - memory deleted
Reset - memory not deleted

Outputs PNP, NPN

Pre-warning to ribbon ending
Paper feed ON
Printing started
Error - end of ribbon
Error - end of labels
Print data available
Device ready
Label in peel-off position
Printer error

7 Digital I/O interface 5 VDC; 15 pin SUB-D socket connector

Inputs PNP

Label feed
Reprint
Start printing
Reset - memory not deleted

Outputs PNP, NPN

Pre-warning to ribbon ending
Paper feed ON
Error - end of ribbon
Error - end of labels
Print data available
Label in peel-off position
Printer error



Accessory:
2-Port Ethernet Switch
10/100 Mbit/s

Technical data

● typical ■ standard □ option

Print module		Type	PX Q4.3		PX Q4		PX Q6.3		
Printing method	Thermal transfer		●	●	●	●	●	●	
	Thermal direct		●	●	-	-	●	●	
Printable resolution	dpi		203	300	300	600	203	300	
Print speed	up to mm/s		300	300	300	150	250	250	
Print width	up to mm		104	108.4	105.7	105.7	168	162.6	
Direction of label transfer			L to the left or R to the right						
Print distance to locating edge	for L and R mm		1	1	1	1	1	1	
	with automatic saving L and R mm		3.2/2.6	1/0.4	2/2	2/2	1.2/1.2	3.9/3.9	
Material									
Labels			Paper, plastics such as PET, PE, PP, PI, PVC, PU, acrylate, Tyvec						
Labels ¹⁾	Width	mm	10 - 116		10 - 116		50 - 174		
	Height without backfeed	from mm	6		6		12		
	Height with backfeed	from mm	12		12		25		
	Thickness	up to mm	0.60		0.60		0.60		
Liner material	Width	mm	25 - 120		25 - 120		50 - 178		
Ribbon ²⁾	Ink side		outside or inside						
	Roll diameter	up to mm	90						
	Core diameter	mm	25.4						
	Variable length	up to m	600						
	Width	mm	25 - 114		25 - 114		50 - 170		
	Automatic saving		□		□		□		
Print module dimensions and weights									
Width x Height x Depth		mm	245 x 300 x 333				245 x 300 x 393		
Weight		kg	11.5				12		
Label sensor with position indication									
Gap sensor		for	labels, punch marks or print marks and end of material						
Reflective sensor		reflex from below	for	print marks on non-transparent liner materials and end of material					
Distance of sensor to locating edge		mm	4 - 60		4 - 60		4 - 60		
Material passage		mm	2						
Electronics									
Processor 32 bit clock rate		MHz	800						
Main memory (RAM)		MB	256						
Data memory (IFFS)		MB	50						
Slot to connect a SD memory card (SDHC, SDXC)			■						
Battery for time and date, real-time clock			■						
Data memory when power is switched off (e.g. serial numbering)			■						
Interfaces									
RS232C 1,200 to 230,400 baud/8 bit			■						
USB 2.0 Hi-speed device to connect a PC			■						
Ethernet 10/100 Mbit/s			LPD, RawIP printing, SOAP webservice, OPC UA, WebDAV DHCP, HTTP/HTTPS, FTP/FTPS, TIME, NTP, Zeroconf, SNMP, SMTP, VNC						
1 x USB host on the operation panel		for	Service Key, USB memory stick, USB WLAN stick, USB Bluetooth adapter						
2 x USB host on the back of the device		for	keyboard, barcode scanner, USB memory stick, USB WLAN stick, USB WLAN stick with a rod antenna, USB Bluetooth adapter, external operation panel						
Digital I/O interface 24 VDC with 10 inputs and 11 outputs			□						
Digital I/O interface 5 VDC with 4 inputs and 4 outputs			□						
2-Port Ethernet Switch 10/100 Mbit/s			□						
Operating data									
Power supply			100-240 VAC, 50/60 Hz, PFC						
Power consumption			Standby <10 W / typical 150 W / up to 300 W						
Temperature / humidity		Operation	+5 - 40°C / 10 - 85 %, not condensing						
		Stock	0 - 60°C / 20 - 85 %, not condensing						
		Transport	-25 - 60°C / 20 - 85 %, not condensing						
Approvals			CE, FCC Class A, ICES-3						
		in preparation	cULus, CB, CCC						

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

²⁾ The ribbon should at least correspond with the width of the liner material.

Technical data

■ standard □ option

Operation panel			
Colored LCD touch display	Screen diagonal	"	4.3
		Resolution Width x Height px	480 x 272
Setup options			
Print Labels Ribbon Peel-off Apply Interfaces Error	Region: - Language - Country - Keyboard - Time zone Time Display: - Brightness - Power saving mode - Orientation Interpreter		
Status bar			
Data reception Record datastream Ribbon warning SD memory card plugged in USB memory stick plugged in	Bluetooth WLAN Ethernet USB slave Time		
Monitoring			
Ribbon	Direction of winding Pre-warning End of material	Print roller for backfeed open	
Labels	End of material		
Print head Voltage	Temperature open		
Test routines			
System diagnostics	on start-up, including print head detection		
Information display, test printout, analysis	Status printout Fonts list List of devices WLAN status Record print data on memory card	Test grid Label profile List of events Monitor mode	
Status reports	- Printout of device settings, e.g. print lengths and service hours - Device status request by software command - Display of, e.g., network errors, no links, barcode errors, periphery errors, etc.		
Fonts			
Font types provided internally	5 Bitmap fonts: 12 x 12 dots 16 x 16 dots 16 x 32 dots OCR-A OCR-B	7 vector fonts: AR Heiti Medium GB-Mono CG Triumvirate Condensed Bold Garuda HanWangHeiLight Monospace 821 Swiss 721 Swiss 721 Bold	
to be stored	TrueType fonts		
Character sets	Windows-1250 to -1257 DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869 EBCDIC 500 ISO 8859-1 to -10 and -13 to -16 WinOEM 720 UTF-8 MacRoman DEC MCS KOI8-R Western European Eastern European Chinese simplified Chinese traditional Thai		
		Cyrillic Greek Latin Hebrew Arabic	

cab uses free and Open Source Software in its products.
For information see www.cab.de/opensource

Fonts			
Bitmap fonts	Widths and heights 1 - 3 mm Zoom factors 2 to 10 Orientations 0°, 90°, 180°, 270°		
Vector-/ TrueType fonts	Widths and heights 0,9 - 128 mm Continuous zoom Orientation 360° in steps of 1°		
Font styles	bold, italic, underlined, outline, inverse - depending from the font types		
Character spacing	variable or monospace for fixed character spacings		
Graphics			
Graphic elements	Lines, arrows, rectangles, circles, ellipses - filled or filled with fading		
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG		
Barcodes			
Linear	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C EAN 8, 13 EAN/UCC 128/GS1-128 EAN/UPC Appendix 2 EAN/UPC Appendix 5 FIM HIBC	Interleaved 2/5 Ident and routing code of Deutsche Post Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0	
2D and stacked	DataMatrix DataMatrix Rectangle Extension QR code Micro QR code GS1 QR code GS1 DataMatrix PDF 417 Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F Dotcode RSS 14 truncated, limited, stacked, stacked omni-directional All codes are variable in terms of height, modular width and ratio; orientations 0°, 90°, 180°, 270° check digit, plain text printout and start / stop code are options depending from the type of code		
Software			
Label software	cablabel S3 Lite cablabel S3 Viewer cablabel S3 Pro cablabel S3 Print		■ ■ □ □
Running also with	CODESOFT NiceLabel BarTender		
Stand-alone operation			■
Windows printer drivers WHQL certified for	Windows Vista Windows 7 Windows 8 Windows 8.1 Windows 10	Server 2008 Server 2008 R2 Server 2012 Server 2012 R2 Server 2016 Server 2019	■
Apple Mac OS X printer drivers	from version 10.6		■
Linux printer drivers	from CUPS 1.2		■
Programming	JScript printer language abc Basic Compiler		■ ■
Integration	SAP Database Connector		■ ■
Emulation	ZPL (Datastream to be tested in advance)		□
Administration	Printer control Configuration in Intranet and Internet Network Manager (in preparation)		■ ■ ■

Label software cablabel S3

Designing, printing, administrating

cablabel S3 opens up the full potential of cab devices. First of all, the label must be designed. cablabel S3 is of a modular design which makes it adaptable to requirements step by step. To support functions like native JScript programming, elements such as the JScript Viewer are embedded as plug-ins. The designer user interface and the JScript code are synchronized in real time. Special functions like the Database Connector or barcode testers can be integrated.



For further information see
www.cab.de/en/cablabel



Stand-alone printing

This operating mode is the printer's ability to select and print labels even when it is not connected to a host system.

The label has to be designed with a software such as cablabel S3 or by direct programming with a text editor on a PC. Label formats, texts, graphics as well as database contents are stored on a memory card, a USB memory stick or in the internal IFFS memory.

Only variable data are sent to the printer via a keyboard, a barcode scanner, scales or other host systems and/or recalled by the Database Connector from the host and printed.



OPC UA

cab printers of the current generation are ready to interact with machines and components of different manufacturers in industrial plants.

An OPC UA server and client is part of the firmware.

The server enables printer configuration and control, while dynamic print data can be prepared via a defined programming interface.

With a client integrated, data fields from other OPC UA-enabled machines can be read and put on the label without the need for an additional software component.



Printer control

Drivers

To control the printer with a software other than cablabel S3, cab provides drivers in 32 / 64 bit for operating systems starting from Windows Vista, Mac OS 10.6 and Linux with CUPS 1.2.



Windows¹⁾ drivers

cab printer drivers are WHQL-certified. They ensure optimum stability on the Windows operating system.



Mac OS X²⁾ drivers

cab provides CUPS-based printer drivers for Mac OS X applications.



Linux³⁾ drivers

Linux drivers are CUPS-based.

Drivers are offered on the DVD delivered with the printer and for free download at www.cab.de/en/support

Programming



JScript

To control the printer, cab has developed the embedded programming language JScript. See manual for free download at www.cab.de/en/programming



abc Basic Compiler

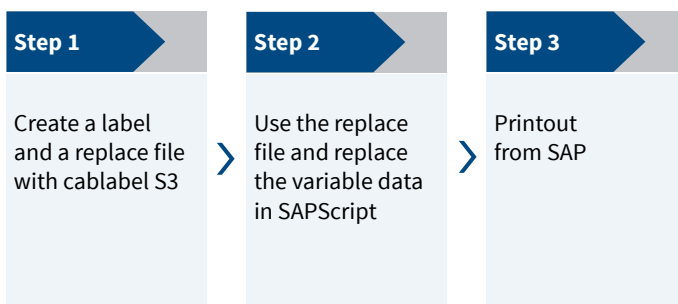
In addition to JScript and as an integral part of the firmware, it allows advanced printer programming before data are sent to printout. For example, external printer languages can be replaced without interfering in the current print job. Also data from other systems such as a scale, a barcode scanner or PLC can be integrated.

Integration



Printer Vendor Program

As a partner in SAP's⁴⁾ Printer Vendor Program, cab has developed a replace method to enable easy control of a cab printer via SAPScript from SAP R/3. Only variable data are sent to the printer by the host. Pictures and fonts that had priorly been stored in the local memory (IFFS, memory card, etc.) are merged.



¹⁾ Windows is a registered trademark of Microsoft Corporation

²⁾ MAC OS X is a registered trademark of Apple Computer, Inc.

³⁾ for device series SQUIX, MACH 4S, EOS, HERMES Q, PX, PX Q

⁴⁾ SAP and all corresponding logos are trademarks or registered trademarks of SAP SE

Printer administration



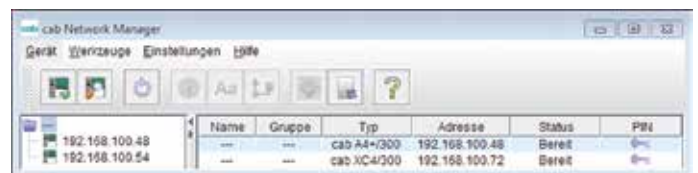
Configuration in Intranet and Internet

The HTTP and FTP server integrated in the printer via standard programs like a web browser or FTP clients allows printer control and configuration, firmware updates and memory card administration. Via email or SNMP, the SNMP and SMTP client datagram sends status, warning and error messages to administrators and users. Time and date are synchronized by a time server.



Network Manager in preparation

It is possible to simultaneously manage several printers within the network. Control, configuration, firmware updates, memory card administration, data synchronization and PIN administration are supported from one single location.



















Database Connector

Printers connected to a network may directly access data from a central ODBC or OLEDB-ready database and print it on a label. While printing, data can be rewritten to the database.



Accessories





2.1		SD memory card 8 GB
2.2		USB memory stick 8 GB
2.3		USB WLAN stick 2.4 GHz 802.11b/g/n Hotspot or Infrastructure Mode
2.4		USB WLAN stick with a rod antenna for extended reach 2.4 GHz 802.11b/g/n + 5 GHz 802.11a/n/ac Hotspot or Infrastructure Mode
2.5		USB Bluetooth adapter
2.6		2-Port Ethernet Switch 10/100 Mbit/s
2.7		I/O interface connector SUB-D, 25 pin with clamping screws to connect all control signals to the I/O interface
2.8		I/O interface connector SUB-D, 15 pin with clamping screws to connect a cable
2.9		Print rollers DRS Coating: silicone They have an extra long service life at a higher imprint tolerance.

2.10		External operation panel If the operation panel is not accessible after printer installation, an external one can be additionally connected.
		Connecting cable USB , length 1.8 m
		Connecting cable USB , length 3 m
		Connecting cable USB , length 5 m
		Connecting cable USB , length 11 m
		Connecting cable USB , length 16 m
2.11		Label selection - I/O box Up to 16 different labels can be selected from a memory card by a master control, e.g. PLC.
2.12		Connecting cable RS232 C 9/9 pin, length 3 m
2.13		Interface cover to prevent slots from humidity and contamination



Functionality of the device and compliance to CE standards are guaranteed only in association with accessories provided or recommended by cab.














Delivery program


Pos.		Part no.	Devices	dpi	Part no.	Print heads	dpi	Part no.	Print rollers
1.1		5591501.xxx	Print module PX Q4.3L/200	5977382.001	Print head 4.3 200	5954180.001			Print roller DR4
		5591502.xxx	Print module PX Q4.3L/300						
		5591503.xxx	Print module PX Q4L/300	5977444.001	Print head 4 300				
		5591504.xxx	Print module PX Q4L/600	5977380.001	Print head 4 600				
1.2		5591505.xxx	Print module PX Q6.3L/200	5977386.001	Print head 6.3 200	5954245.001			Print roller DR6
		5591506.xxx	Print module PX Q6.3L/300	5977387.001	Print head 6.3 300				
1.1		5591510.xxx	Print module PX Q4.3R/200	5977382.001	Print head 4.3 200	5954180.001			Print roller DR4
		5591511.xxx	Print module PX Q4.3R/300						
		5591512.xxx	Print module PX Q4R/300	5977444.001	Print head 4 300				
		5591513.xxx	Print module PX Q4R/600	5977380.001	Print head 4 600				
1.2		5591514.xxx	Print module PX6.3R/200	5977386.001	Print head 6.3 200	5954245.001			Print roller DR6
		5591515.xxx	Print module PX6.3R/300	5977387.001	Print head 6.3 300				

.xxx	Device options
.201	Digital I/O interface 24 VDC
.202	Digital I/O interface 24 VDC with automatic saving
.203	Digital I/O interface 5 VDC
.204	Digital I/O interface 5 VDC with automatic saving

	Scope of delivery
DVD:	Print module PX Q Power cable Type E+F, length 1.8 m Connecting cable USB, length 1.8 m Assembly instructions DE/EN/FR Assembly instructions DE/EN/FR Configuration manual DE/EN/FR Service manual DE/EN Spare parts list DE/EN Programming manual EN Windows printer drivers WHQL certified for Windows Vista Server 2008 Windows 7 Server 2008 R2 Windows 8 Server 2012 Windows 8.1 Server 2012 R2 Windows 10 Server 2016 Server 2019 cablabel S3 Lite and Viewer Database Connector (activation excluded)

Delivery program

Pos.		Part no.	Accessories
2.1		5977370	SD memory card 8 GB
2.2		5977730	USB memory stick 8 GB
2.3		5978912.001	USB WLAN stick 2.4 GHz 802.11b/g/n
2.4		5977731	USB WLAN stick with a rod antenna 2.4 GHz 802.11b/g/n + 5 GHz a/n/ac
2.5		5977732	USB Bluetooth adapter
2.6		6010520	2-Port Ethernet Switch 10/100 Mbit/s
2.7		5917651	I/O interface connector SUB-D, 25 pin
2.8		5917652	I/O interface connector SUB-D, 15 pin
2.9		5954985.001	Print roller DRS4
		5954979.001	Print roller DRS6
2.10		6010186	External operation panel
		5907718	Connecting cable USB, 1.8 m
		5907730	Connecting cable USB, 3 m
		5907750	Connecting cable USB, 5 m
		5907760	Connecting cable USB, 11 m
5907765	Connecting cable USB, 16 m		
2.11		5948205	Label selection - I/O box
2.12		5550818	Connecting cable RS232 C 9/9 pin, length 3 m
2.13		5591753	Interface cover

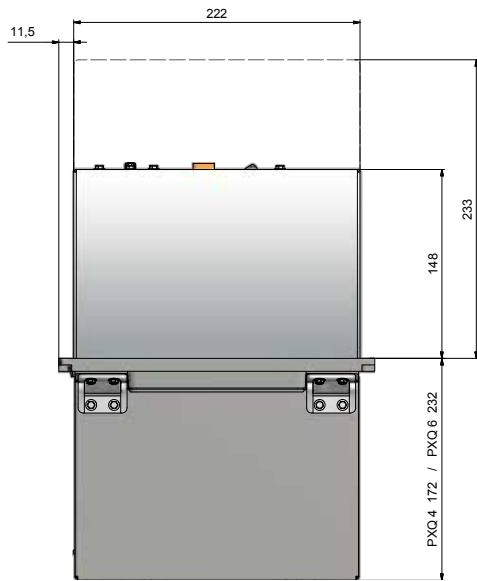
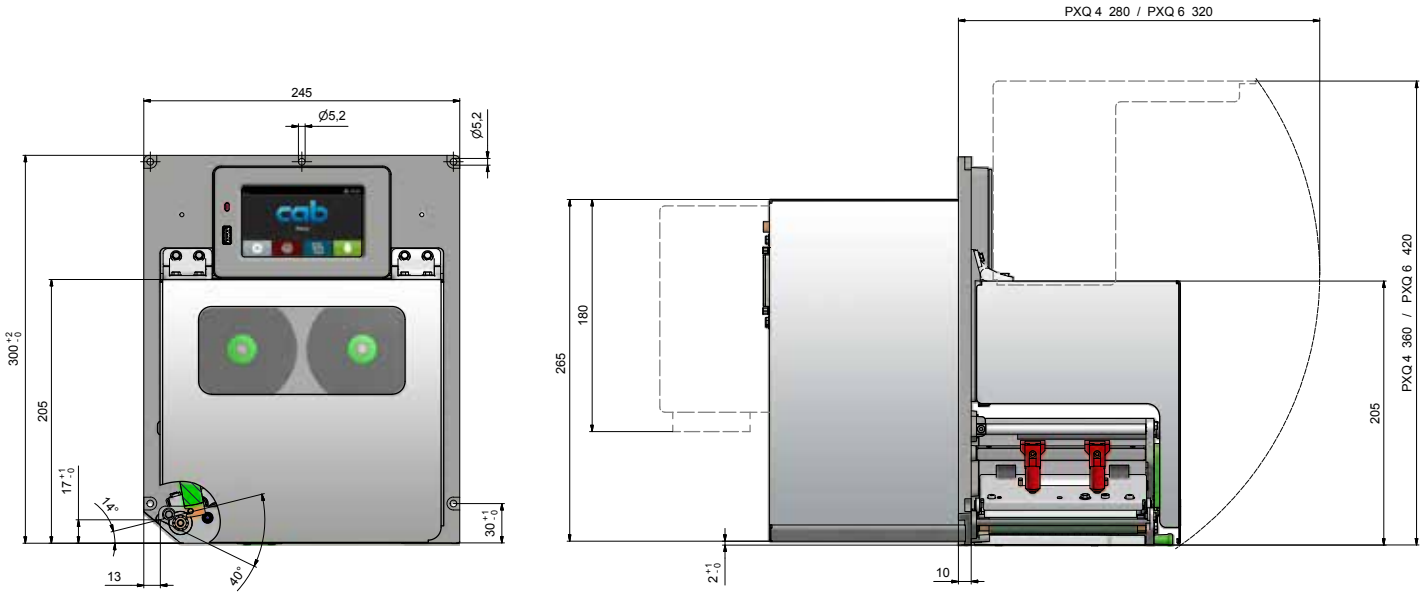
Pos.		Part no.	Label software
11.9		Bundle	cablabel S3 Lite (Download at cab.de/en)
		5588001	cablabel S3 Pro, 1 WS
		5588100	cablabel S3 Pro, 5 WS
		5588101	cablabel S3 Pro, 10 WS
		5588150	cablabel S3 Pro, 1 add. licence
		5588151	cablabel S3 Pro, 4 add. licences
		5588152	cablabel S3 Pro, 9 add. licences
		5588002	cablabel S3 Print, 1 WS
		5588105	cablabel S3 Print, 5 WS
		5588106	cablabel S3 Print, 10 WS
5588155	cablabel S3 Print, 1 add. licence		
5588156	cablabel S3 Print, 4 add. licences		
5588157	cablabel S3 Print, 9 add. licences		
		in preparation	cablabel S3 Print Server
11.10		9008486	Programming manual EN, printed copy

Scopes of delivery, design and technical specifications correspond to the date of the printing. Subject to change. The data provided in the catalog do not represent any warranty or guarantee.

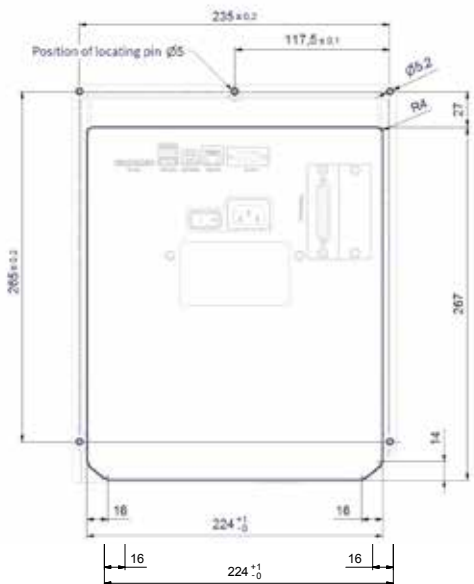


Information is also available on the Internet:
www.cab.de/en/pxq

Dimensions



Weight of print module	PX4.3	PX4	PX6.3
kg	11.5	11.5	12



cab product overview

Label printers MACH1, MACH2
in the lower price segment



Label printers MACH 4S
where little space is available



Label printers EOS2
Desktop device for label rolls
up to diameter 152 mm



Label printers EOS5
Desktop device for label rolls
up to diameter 203 mm



Label printers SQUIX 2
Industrial device for print widths
up to 57 mm



Label printers SQUIX 4
Industrial device for print widths
up to 108 mm



Label printers SQUIX 6.3
Industrial device for print widths
up to 168 mm



Label printers A8+
Industrial device for print widths
up to 216 mm



Label printers XD4T
for double-sided printing



Label printers XC
for two-color printing



Print and apply systems HERMES Q
for automation



Print and apply systems Hermes C
for two-color printing and applying



Print modules PX Q
to be integrated in labeling machines



Labels
made from more than 400 materials



Ribbons
in wax, resin and resin/wax qualities



Label software cablabel S3
Design, print, control



Label dispensers HS, VS
for horizontal or vertical dispense



Labeling heads IXOR
to be integrated in labeling machines



Marking lasers XENO 4
in 19" housings



Laser marking systems
in desktop housings



Germany
cab Produkttechnik GmbH & Co KG
Karlsruhe
Phone +49 721 6626 0
www.cab.de

France
cab Technologies S.à.r.l.
Niedermodern
Phone +33 388 722501
www.cab.de/fr

USA
cab Technology, Inc.
Chelmsford, MA
Phone +1 978 250 8321
www.cab.de/us

Mexico
cab Technology, Inc.
Juárez
Phone +52 656 682 4301
www.cab.de/es

Taiwan
cab Technology Co., Ltd.
Taipei
Phone +886 (02) 8227 3966
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China
cab (Shanghai) Trading Co., Ltd.
Shanghai
Phone +86 (021) 6236 3161
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China
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