

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 (Q 4. 3	PX	Q4	
Printable resolu	tion 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 resolu	tion 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



Operation panel

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

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.

6 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.

Print roller removal

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

3 Simple replacement of materials

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

2 Label sensor

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

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, 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
- 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 position Y



Print parameters



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

If the operation panel of a printer cannot be accessed, an additional external one can be plugged.

Same functionality as on the printer

Landscape or portrait mode

Operability as desired on the external operation panel or on the printer

Printer connectivity: USB 2.0 Hi-Speed device

- 1 LED: Power ON
- 2 USB port to plug a service key or a memory stick, to transfer data to the IFFS memory
- 3 Connecting USB cable for power supply cab provides specified cables. Lengths are 1.8 m to 16 m.



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 Slot to connect a SD memory card
- 2 x USB Host to connect a Service Key, an USB stick, a keyboard, an USB WLAN stick, 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

SD Card USB David Ethernal PG 222 C

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
Start printing
Reprint
Delete print job
Label removed
Stop printing

Outputs PNP, NPN
Device ready
Print data available
Label in peel-off position
Paper feed ON
Pre-warning to ribbon ending

Label feedEnd of ribbon and/or end ofPauselabelsResetPrinter error

Printing started

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

Inputs PNP Outputs PNP, NPN

Label feed Pre-warning to ribbon ending
Reprint End of ribbon
Start printing End of labels
Pause Print data available
Delete print job End of printing
Printer error

For more interfaces see "Options" on page 6

Options are parts or units to perform special functions. They are assembled to a printer in addition to or instead of standards.

If order implies options be assembled ex factory, the part numbers of such printers and options are added by .250. Options delivered separately are added by .001.

		1.1	1.2	1.3		
Pos.	Designation	PX Q4.3	PX Q4	PX Q6.3	.250	.001
3.1	Automatic ribbon saving				•	-
3.2	Print roller DRS				•	•
3.3	Digital I/O interface 24 VDC				•	•
3.4	Digital I/O interface 5 VDC				•	•
3.5	2 port Ethernet Switch 10/100 Mbit/s				•	•
3.6	Interface for plugging an external label sensor				•	•



Automatic ribbon saving

Use is recommended in cases of at least 60 mm unprinted area on a label. While labels are fed, the print head is lifted and the ribbon stopped, resulting in less material consumption.





Print roller DRS

providing a silicone coating. Product life is extra long, taken a higher print offset into account on a label.





Digital I/O interface 24 VDC

25 pin SUB-D socket connector





Digital I/O interface 5 VDC

15 pin SUB-D socket connector





2 port Ethernet Switch 10/100 Mbit/s

to connect another terminal device in a joint network. Signals are looped through





Interface for plugging an external label sensor

M12 plug, 5 pins, a-coded Plug-compatible with CEON and other sensors based on PNP and 24 V



Accessories

Accessorial products are plugged or screwed to a printer by the customer.

		1.1	1.2	1.3
Pos.	Designation	PX Q4.3	PX Q4	PX Q6.3
2.1	SD memory card			
2.2	USB memory stick			
2.3	USB WLAN stick			
2.4	USB WLAN stick including a rod antenna			
2.5	USB Bluetooth adapter			
2.6	I/O interface connector SUB-D, 25 pins			
2.7	I/O interface connector SUB-D, 15 pins			
2.8	External operation panel			
2.0	Connecting USB cable			
2.9	Label selection - I/O box			
2.10	Connecting RS232 C cable			
2.11	Interface cover unit			

2.1	SD memory card
2.2	USB memory stick
2.3	USB WLAN stick 2.4 GHz 802.11b/g/n hotspot or infrastructure mode
2.4	USB WLAN stick including a rod antenna to extend the range of operation 2.4 GHz 802.11b/g/n + 5 GHz 802.11a/n/ac hotspot or infrastructure mode
2.6	I/O interface connector SUB-D, 25 pins All control signals can be attached to the I/O interface using clamping screws.
2.7	I/O interface connector SUB-D, 15 pins All control signals can be attached to the I/O interface using clamping screws.

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





Technical data

● typical ■ standard □ option **Print module** PX Q4.3 PX Q4 PX 06.3 Type Printing method Thermal transfer • • • • • • Thermal direct • • • • Printable resolution dpi 300 300 600 203 300 203 Print speed 300 150 250 250 up to mm/s 300 300 105.7 105.7 Print width up to mm 104 108.4 168 162.6 Print length 13,500 6,000 1,500 9,000 4,000 up to mm 6.000 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 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 Labels1) Width 10 - 116 10 - 116 50 - 174 mm Height without backfeed 12 from mm 6 6 12 12 25 Height with backfeed from mm 0.60 0.60 0.60 Thickness up to mm Liner material Width 16 - 120 16 - 120 50 - 178 mm Thickness 0.03 - 0.16 mm Ribbon²⁾ Ink side outside or inside Roll diameter 90 up to mm Core diameter 25.4 mm Variable length 600 up to m 25 - 114 25 - 114 50 - 170 Width mm Automatic saving П П П Print module dimensions and weights 245 x 300 x 333 Width x Height x Depth 245 x 300 x 393 mm 11.5 12 Weight kg 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) ΜВ 256 Data memory (IFFS) ΜВ 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 LPD, RawIP printing, SOAP web service, OPC UA, WebDAV Ethernet 10/100 Mbit/s IPv4 and IPv6 DHCP, HTTP/HTTPS, FTP/FTPS, TIME, NTP, Zeroconf, SNMP, SMTP, VNC 2 x USB host on the control panel, Service Key, USB stick, USB WLAN stick, USB WLAN stick with a rod antenna, 2 x USB host on the back of a unit keyboard, barcode scanner, external control panel Digital I/O interface 24 VDC with 8 inputs and 9 outputs Digital I/O interface 5 VDC with 5 inputs and 6 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 100 W / max. 200 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, UKCA, FCC Class A, ICES-3, cULus, CB, RCM

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

Colored LCD touch di	isplay	Screen diagona	l	"	4.3
		Resolution Widt	h x F	leight px	480 x 272
Setup options					
	Print Labels Ribbon Peel-off Apply Interfaces Error		Tim Dis	play: Brightnes Power sa Orientati	l e ss ving mode
Status bar			Inte	erpreter	
		tastream	USI Tin	ernet B slave	
Monitoring					
	Ribbon	Direction of wind Pre-warning End of material	ing	Print rolle backfeed	
	Print head	End of material Voltage Temperature open			
Test routines					
System diagnostics	on start-u	p, including print	head	detection	1
Information display, test printout, analysis	Status pri Fonts list List of dev WLAN stat Record pri	rices cus	Lab List Mo	t grid pel profile of events nitor mod	
Status reports	Record print data on memory card - 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.			and	
Fonts		, μομ		-,	
Font types provided internally	5 Bitmap (12 x 12 do 16 x 16 do 16 x 32 do OCR-A OCR-B	ts AR Hei ts CG Trii ts Garud	iti Me umvi a angH space 721	edium GB- rate Cond leiLight è 821	
to be stored	TrueType				
Character sets	Windows-1250 to -1257 DOS 437, 737, 775, 850, 852, 85 EBCDIC 500 ISO 8859-1 to -10 and -13 to WinOEM 720 UTF-8 MacRoman DEC MCS KOI8-R Western European Eastern European Chinese simplified Chinese traditional		-16	illic ek	6, 869

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

		■ standard □ opti	on		
Fonts					
Bitmap fonts	Zoom factors 2 to 10 Orientations 0°, 90°, 180°, 2	Orientations 0°, 90°, 180°, 270°			
Vector-/ TrueType fonts	Widths and heights 0,9 - 128 Continuous zoom Orientation 360° in steps of				
Font styles	bold, italic, underlined, outletending from the font ty	line, inverse			
Character spacing	variable or monospace for f	ixed character spacings	;		
Graphics	Linea amazon mastanalar ai				
Graphic elements	Lines, arrows, rectangles, ci - filled or filled with fading				
Graphic formats Codes	PCX, IMG, BMP, TIF, MAC, GII	-, PNG			
1D 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 cod of Deutsche Post Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0	е		
2D and stacked codes	DataMatrix DataMatrix Rectangle Exten QR code Micro QR code rMQR code GS1 QR code GS1 DataMatrix GS1 Digital Link (QR and Da PDF 417 Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F Dotcode RSS 14 truncated, limited, s stacked omni-directional All codes are variable in terr modular width and ratio; oric check digit, plain text prints are options depending from	taMatrix) tacked, ms of height, entations 0°, 90°, 180°, 2° out and start / stop code			
Software					
Label software	cablabel S3 Lite cablabel S3 Viewer cablabel S3 Pro cablabel S3 Print]]		
Running also with	CODESOFT Loftware Spectrum NiceLabel BarTender	CODESOFT Loftware Spectrum NiceLabel			
Stand-alone operation		•			
Windows printer drivers certified WHQL for	Windows 11 Se	erver 2016 erver 2019 erver 2022	ı		
Apple printer drivers	Mac OS X 10.6 or any later re	elease	ı		
Linux printer drivers	CUPS 1.2 or any later releas	e =	1		
Programming	JScript printer language abc Basic Compiler ZPL II (Datastream be tested in advance) □				
Integration	SAP Database Connector				
Administration	Printer control Configuration in Intranet an	nd Internet			

cablabel S3 software

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.







Stand-alone printing

A printer can select and print labels even when the system is disconnected from a host.

Labels are designed using software such as cablabel S3 or a text editor on a PC. Label formats, texts, graphics and data taken from a database are transferred to a memory card, a USB memory stick or the internal IFFS memory.

Only variable data are sent to the printer using a keyboard, a barcode scanner, scale or another host system and/or are recalled from a host by the Database Connector and printed.



OPC UA

The latest cab printers are ready to interact with machines and components of different manufacturers in industrial plants.

An OPC UA server and a client are part of the firmware.

The server enables a printer be configured and controlled. Dynamic print data can be edited using a defined programming interface.

The integral client enables reading data fields from other machines ready for OPC UA, as well as transferring data to a label. No additional software is needed.



Printer control

Drivers



cab provides drivers to control a printer with software other than cablabel S3.



Free download on www.cab.de/en/support



Programming



JScript

To control a printer, cab developed the embedded JScript programming language. Free manual download on www.cab.de/en/programming

abc Basic Compiler

An integral part of the firmware, it adds to JScript in terms of programming a printer before data are edited for processing. For example, external printer languages can be replaced without intervening in the print job in process. Data may be transferred also from other systems, such as scales, barcode scanners or PLC.

Connecting to SAP®

Labels can be printed from SAP¹⁾ on cab devices and systems. There are various methods:

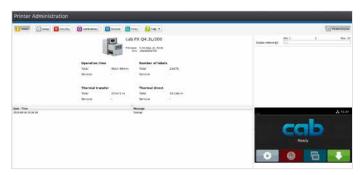
- Printing with SAPscript
- **Printing with SmartForms**
- Printing with Adobe Interactive Forms

See instructions in detail on www.cab.de/en/sap

Printer administration

Configuration on the Intranet / Internet

cab printers integrate a HTTP and FTP server. A printer can be controlled and configured, firmware updated and memory cards managed using a standard web browser or FTP client. Administrators and operators are notified of states, warnings and errors via email or datagrams, based on a SNMP/ SMTP client. Time and date are synchronized by a time server.



Database Connector

Printers connected to a network are enabled to access data directly from a central ODBC / OLEDB database and transfer it to a label. While labels are printed, data can be rewritten to the database..



 $^{^{\}scriptscriptstyle{1)}}$ SAP and associated logos are trademarks or registered trademarks of SAP SE

PX Q delivery program

Print modules L

Ро	s.	Part no.	Designation
1.1		5591501 5591502	Print module PX Q4.3L/200 I/O 24 VDC Print module PX Q4.3L/300 I/O 24 VDC
	1.1	5591503 5591504	Print module PX Q4L/300 I/O 24 VDC Print module PX Q4L/600 I/O 24 VDC
1.2		5591505 5591506	Print module PX Q6.3L/200 I/O 24 VDC Print module PX Q6.3L/300 I/O 24 VDC

xxxxxxx.250 if PX Q provides options

Print modules R

Ро	S.	Part no.	Designation
1.1		5591510 5591511 5591512 5591513	Print module PX Q4.3R/200 I/O 24 VDC Print module PX Q4.3R/300 I/O 24 VDC Print module PX Q4R/300 I/O 24 VDC Print module PX Q4R/600 I/O 24 VDC
1.2		5591514 5591515	Print module PX Q6.3R/200 I/O 24 VDC Print module PX Q6.3R/300 I/O 24 VDC

xxxxxxx.250 if PX Q provides options

	Scope of PX Q print module delivery
	PX Q print module Power cable Type E+F, 1.8 m Connecting USB cable, 1.8 m Assembly instructions DE/EN/FR
	Available online
https://setup.cab.de/en	Assembly instructions DE/EN/FR, Configuration manuals DE/EN/FR Service manuals DE/EN Spare parts lists DE/EN Programming manual EN Windows printer drivers certified WHQL for Windows 10 Server 2016 Windows 11 Server 2019 Server 2022 Apple Mac OS X printer drivers DE/EN/FR Linux printer drivers DE/EN/FR cablabel S3 Lite software and Viewer Database Connector (not active)

Options

	0113		
Pos.		Part no.	Designation
3.1		5591794.250 5591796.250 5591795.250 5591797.250	Automatic ribbon saving 4L Automatic ribbon saving 6L Automatic ribbon saving 4R Automatic ribbon saving 6R
3.2		5954985.xxx	Print roller DRS4
3.2	-	5954979.xxx	Print roller DRS6
3.3		6010372.xxx	Digital I/O interface 24 VDC
3.4		6010512.xxx	Digital I/O interface 5 VDC
3.5		6010520.xxx	2-Port Ethernet Switch 10/100 Mbit/s
3.6	A.C.	5591816.xxx	Interface for plugging an external label sensor

xxx - .250 assembled to the printer .001 delivered separately



PX Q delivery program

Accessories

Pos.		Part no.	Designation
2.1		5977370	SD memory card
2.2		5977730	USB memory stick
2.3		5978912	USB WLAN stick 2.4 GHz 802.11b/g/n
2.4		5977731	USB WLAN stick including a rod antenna 2.4 GHz 802.11b/g/n + 5 GHz a/n/ac
2.6		5917651	I/O interface connector SUB-D, 25 pins
2.7		5917652	I/O interface connector SUB-D, 15 pins
		6010186	External operation panel
2.8		5907718.850 5907730.850 5907750.850 5907760.850 5907765.850	Connecting USB cable, 1.8 m Connecting USB cable, 3 m Connecting USB cable, 5 m Connecting USB cable, 11 m Connecting USB cable, 16 m
2.9		5948205	Label selection - I/O box
2.10		5550818	Connecting RS232 C cable 9/9 pins, 3 m
2.11	//•••	5591753	Interface cover unit

Label software

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

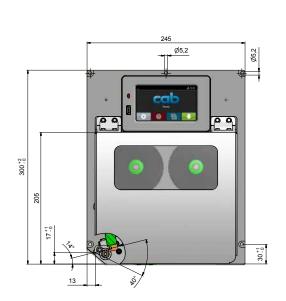
Wear parts

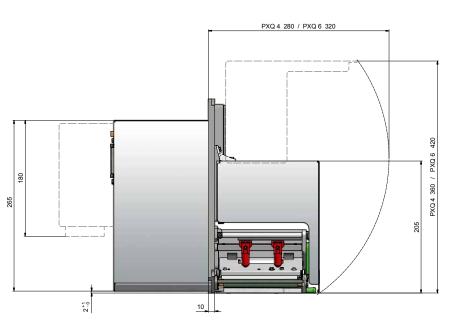
Pos.		Part no.	Designation	dpi	
		5977382.001	Print head 4.3	200	
	11 1 1 m	5977383.001	Print head 4.3	300	
		5977444.001 Print head 4		300	
		5987070.001	Print head 4	600	
		5977386.001	Print head 6.3	200	
		5977387.001	Print head 6.3	300	
		5954180.001	Print roller DR4		
		5954245.001	Print rollerr DR6		

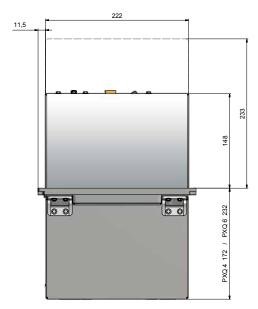
User languages

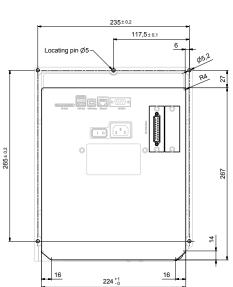
Language	Assembly	Control	Windows	Service	cablabel
	instructions	panel	driver	manual	S 3
European U	nion				
Bulgarian		Х	Х		Х
Danish	X	Х	X		
German	X	Χ	X	Χ	X
Estonian		Χ	X		
Finnish		Х	X		
French	X	Χ	Х		X
Greek	X	Χ	X		
Italian	X	Χ	Χ		Χ
English	X	Χ	Χ	Χ	X
Croatian		Χ	Χ		
Latvian		Χ	Χ		
Lithuanian	X	Χ	Χ		
Dutch	X	Χ	Χ		
Polish		Χ	Χ		Х
Portuguese		Х	Х		
Romanian		Χ	Х		
Swedish		Χ	Х		
Slovak	Х	Χ	Х		
Slowenian		Х	Х		
Spanish		Χ	Х		Х
Czech	X	Χ	Х		Х
Hungarian	X	Χ	Х		
Europe (Nor	n-EU)				
Macedonian		Χ	Х		
Norwegian	X	Χ	Х		
Russian	X	Χ	Х		Х
Serbian		Χ	Χ		
Turkish		Χ	Х		
Asia					
Chinese		Х	Х		Х
(simplified)		^	^		^
Chinese		Χ	Х		Х
(traditional)					
Japanese		X	X		
Korean		Χ	X		X
Thai		Х	X		
Middle East					
Arabian		X			
Persian		X			

Dimensions









Print module weights	PX Q4.3	PX Q4	PX Q6.3
kg	11.5	11.5	12

Overview of cab products

Label printers MACH1, MACH2



Label printers EOS 2



Label printers EOS 5



Label printers MACH 4S



Label printers SQUIX 2



Label printers **SQUIX 4**



Label printers SQUIX 6.3



Label printers SQUIX 8.3



Label printers **XD Q** double-sided



Label printers XC Q two-colored



Print and apply systems HERMES Q



Print and apply systems Hermes C two-colored



Tube labeling systems **AXON 1**



Print modules PX Q



Labels and ribbons



Label software cablabel S3



Label dispensers HS, VS



Labeling heads



Marking lasers



Laser marking systems

