

Print modules PX

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.

Please note:

PX Q will replace the PX series in April 2020. www.cab.de/en/px-print-module

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 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 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
- 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 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

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
- 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 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
- 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 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

Outputs PNP, NPN

Printer error

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

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Print module		Туре	PX (Q4.3	PX	Q4	PX Q6.3	
Printing method	Thermal transfer		•	•	•	•	•	•
Ū	Thermal direct		•	•	_	-	•	•
Printable resoluti	ion	dpi	203	300	300	600	203	300
Print speed	u	p 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 o	r R to the right		
Print distance to	locating edge for La	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	s such as PET, PE	, PP, PI, PVC, PU,	acrylate, Tyvec	
Labels ¹⁾	Width	mm	10 -	- 116	10	- 116	50 -	- 176
	Height without backfeed	from mm		6		6	1	12
	Height with backfeed	from mm	1	12		12	2	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			2	5.4		
	Variable length	up to m			6	00		
	Width	mm	25 -	- 114	25	- 114	50 -	- 170
	Automatic saving		[[
Print module dir	mensions and weights							
Width x Height x Depth mm			245 x 300 x 333				245 x 300 x 393	
Weight kg			11.5					
Label sensor wit	h position indication							
Gap sensor		for	labels, pund	ch marks or prin	t marks and end	of material		
Reflective sensor	reflex from below	for	print marks	on non-transpa	arent liner mate	rials and end of m	aterial	
Distance of senso	r to locating edge	mm	4 - 60 4 - 60			- 60	4 -	- 60
Material passage		mm	2					
Electronics								
Processor 32 bit c	lock rate	MHz			8	00		
Main memory (RA	AM)	MB	256					
Data memory (IFF	FS)	MB	50					
Slot to connect a	SD memory card (SDHC, SDX	C)						
Battery for time a	and date, real-time clock							
Data memory wh (e.g. serial numbe	en power is switched off ering)							
Interfaces								
RS232C 1,200 to 2	230,400 baud/8 bit							
USB 2.0 Hi-speed	device to connect a PC							
Ethernet 10/100 N	Abit/s		LPD, IPv4, IPv6, RawIP printing, DHCP, HTTP, FTP, SMTP, SNMP, TIME, NTP, Zeroconf, SOAP web service					
1 x USB host on th	ne operation panel	for	Service Key, USB memory stick, USB WLAN stick, USB Bluetooth adapter					
2 x USB host on th	ne 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 interfac	ce 24 VDC with 10 inputs and 1	11 outputs						
<u> </u>	ce 5 VDC with 4 inputs and 4 o							
	vitch 10/100 Mbit/s							
Operating data								
Power supply			100-240 VA	C, 50/60 Hz, PFC	•			
Power consumpti	ion		Standby < 10 W / typical 150 W / up to 300 W					
Temperature / hu		eration		′ 10 - 85 %, not c	· ·			
	, <u> </u>	ock		/ 20 - 85 %, not c				
		ansport		⁷ 20 - 85 %, not c				
					9			
Approvals			CE, FCC Cla	iss A, ICES-3				

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 d	isplay	Screen dia	gonal	"	4.3	
		<u>.</u>			480 x 272	
Setup options						
	Print Labels Ribbon Peel-off Apply Interfaces Error	5	Tin Dis	play: - Brightnes - Power sa - Orientatio	l e ss ving mode	
Status bar			Int	erpreter		
Monitoring	Ribbon w SD memo	atastream	WL Eth ged in US	ietooth AN nernet B slave ne		
	Ribbon	Direction of	winding	Print rolle	er for	
		Pre-warning End of mate	g erial	backfeed		
	Labels	End of mate	erial			
	Print head	d Voltage Temperatur open	e			
Test routines						
System diagnostics	on start-u	p, including			1	
Information display, test printout, analysis	Status pri Fonts list List of dev WLAN stat	vices	Lal Lis Mo	st grid pel profile t of events nitor mod		
Status reports	- Printout e.g. prin - Device si - Display o	of device set t lengths and tatus request of, e.g., netwo errors, perip	tings, service h by softwa ork errors,	ours are comma , no links,	and	
Fonts		, , , , , , , , , , , , , , , , , , ,		,		
Font types provided internally	5 Bitmap 12 x 12 do 16 x 16 do 16 x 32 do OCR-A OCR-B	ots A Ots C Ots G H M		edium GB- irate Cond HeiLight e 821		
to be stored	TrueType					
Character sets	DOS 437, 7 EBCDIC 50 ISO 8859- WinOEM 7 UTF-8 MacRoma DEC MCS KOI8-R Western E	1 to -10 and - 720 an European uropean	852, 857, 8 13 to -16 Cyi Gre	rillic eek	6, 869	
	Chinese s Chinese to Thai	raditional		in brew ibic		

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

		■ standard □	option
Fonts			
Bitmap fonts	Widths and heights 1 - 3 r Zoom factors 2 to 10 Orientations 0°, 90°, 180°		
Vector-/ TrueType fonts	Widths and heights 0,9 - 1 Continuous zoom Orientation 360° in steps		
Font styles	bold, italic, underlined, o - depending from the fon	utline, inverse	
Character spacing	variable or monospace fo		cings
Graphics			
Graphic elements	Lines, arrows, rectangles - filled or filled with fadin	g	
Graphic formats	PCX, IMG, BMP, TIF, MAC,	GIF, PNG	
Barcodes	C 20 C 22	1.1.1.10/5	
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 routin of Deutsche Posi Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0	
2D and stacked	DataMatrix DataMatrix Rectangle Ext 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 omni-directional All codes are variable in t modular width and ratio; of check digit, plain text prin are options depending fro	f, stacked, l erms of height, orientations 0°, 90°, 1 ntout and start / stop	
Caffeerana	are options depending fro	om the type of code	
Software Label software	aablab al CO Lite		
Labet 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 te	ested in advance)	
Administration	Printer control Configuration in Intranet Network Manager (in pre		=

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.





Stand-alone printing

www.cab.de/en/cablabel

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⁾³⁾ 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

JS JSc

ABC

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.



Step 2

Use the replace file and replace the variable data in SAPScript

Step 3

Printout from SAP

Printer administration

Configuration in Intranet and Internet

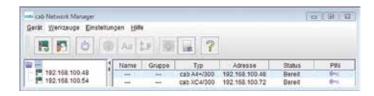
The HTTP and FTP server integrated in the printer via standard programs like a web browser or FTP clients

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.



- 1) Windows is a registered trademark of Microsoft Corporation
- ²⁾ MAC OS X is a registered trademark of Apple Computer, Inc.
- 3) Only for device series SQUIX (except of SQUIX MT), MACH 4S, EOS, HERMES Q and PX
- 4) SAP and all corresponding logos are trademarks or registered trademarks of SAP SE

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.





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 5591502.xxx 5591503.xxx 5591504.xxx	Print module PX Q4.3L/200 Print module PX Q4.3L/300 Print module PX Q4L/300 Print module PX Q4L/600	5977382.001 5977383.001 5977444.001 5977380.001	Print head 4.3 Print head 4.3 Print head 4 Print head 4		5954180.001	Print roller DR4
1.2	5591505.xxx 5591506.xxx	Print module PX Q6.3L/200 Print module PX Q6.3L/300	5977386.001 5977387.001	Print head 6.3 Print head 6.3		5954245.001	Print roller DR6
1.1	5591510.xxx 5591511.xxx 5591512.xxx 5591513.xxx	Print module PX Q4.3R/200 Print module PX Q4.3R/300 Print module PX Q4R/300 Print module PX Q4R/600	5977382.001 5977383.001 5977444.001 5977380.001	Print head 4.3 Print head 4.3 Print head 4 Print head 4		5954180.001	Print roller DR4
1.2	5591514.xxx 5591515.xxx	Print module PX6.3R/200 Print module PX6.3R/300	5977386.001 5977387.001	Print head 6.3 Print head 6.3		5954245.001	Print roller DR6

.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				
	Print module PX Q Power cable Type E+ Connecting cable US Assembly instruction	SB, length 1.8 m			
DVD:	Assembly instruction	ns DE/EN/FR			
	Configuration manu	al DE/EN/FR			
	Service manual DE/EN				
	Spare parts list DE/E	N			
	Programming manua	al EN			
		vers WHQL certified for			
	Windows Vista	-			
	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	Pop	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
		5954985.001	Print roller DRS4
2.9		5954979.001	Print roller DRS6
		6010186	External operation panel
2.10		5907718 5907730 5907750 5907760 5907765	Connecting cable USB, 1.8 m Connecting cable USB, 3 m Connecting cable USB, 5 m Connecting cable USB, 11 m Connecting cable USB, 16 m
2.11	1	5948205	Label selection - I/O box
2.12		5550818	Connecting cable RS232 C 9/9 pin, length 3 m
2.13		5965040	Interface cover

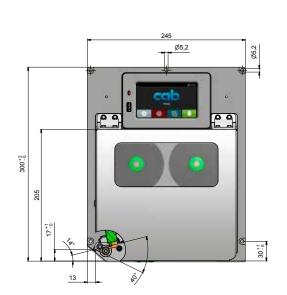
Pos.	Part no.	Label software
Pos.	Part no. Bundle 5588001 5588100 5588101 5588150 5588151 5588152 5588002 5588105 5588106	cablabel S3 Lite (Download at cab.de/en) cablabel S3 Pro, 1 WS cablabel S3 Pro, 5 WS cablabel S3 Pro, 10 WS cablabel S3 Pro, 1 add. licence cablabel S3 Pro, 4 add. licences cablabel S3 Pro, 9 add. licences cablabel S3 Print, 1 WS cablabel S3 Print, 1 WS cablabel S3 Print, 5 WS cablabel S3 Print, 10 WS
	5588155 5588156	cablabel S3 Print, 1 add. licence 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

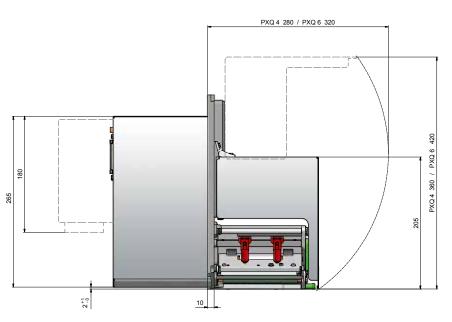
Scopes of delivery, design and technical specifications correspond to the date of the printing. Subject to change. The data provided in the catalog do not represent any warranty or guarantee.

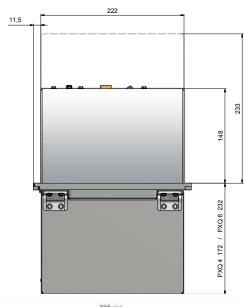


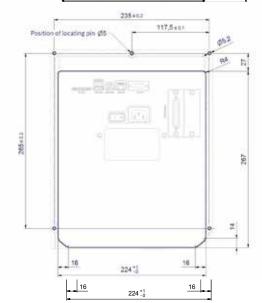


Dimensions









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 SQUIX 2

Industrial device for print widths up to 57 mm



Label printers XD4T for double-sided printing



Print modules PX Q

to be integrated in labeling machines



Label dispensers HS, VS

for horizontal or vertical dispense



Label printers MACH 4S

where little space is available



Label printers SQUIX 4

Industrial device for print widths up to 108 mm



Label printers XC

for two-color printing



Labels

made from more than 400 materials



Labeling heads IXOR

to be integrated in labeling machines



Label printers EOS2

Desktop device for label rolls up to diameter 152 mm



Label printers SQUIX 6.3

Industrial device for print widths up to 168 mm



Print and apply systems HERMES Q

for automation



Ribbons

in wax, resin and resin/wax qualities



Marking lasers XENO 4

in 19" housings



Label printers EOS5

Desktop device for label rolls up to diameter 203 mm



Label printers A8+

Industrial device for print widths up to 216 mm



Print and apply systems Hermes C

for two-color printing and applying



Label software cablabel S3

Design, print, control



Laser marking systems

in desktop housings



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