Status: 09/2019 we identify more Products need labeling Print modules for industrial use Made in Germany

## 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.

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	250	250	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.

#### **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.

#### 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  $\pm 0.2$  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

Printing started Error - end of ribbon Error - end of labels Print data available Device ready Label in peel-off position

**Outputs PNP, NPN** 

Paper feed ON

Pre-warning to ribbon ending

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

Print module		Туре	PX (	24.3	PX	Q4	PX	Q6.3
Printing method	Thermal transfer		•	•	•	•	•	•
	Thermal direct		•	•	_	-	•	•
Printable resolut	ion	dpi	203	300	300	600	203	300
Print speed		up to mm/s	300	300	300	150	250	250
rint width		up to mm	104	108.4	105.7	105.7	168	162.6
irection of label	l transfer				to the left o	r to the right		
Material				Damar	DET DE DD DI	DVC DIL somulate	Ture	
_abels _abels <sup>1)</sup>	Width		20	•		PVC, PU, acrylate		- 176
.abeis"		from mm		116 4		- 116 4		6
	Height Thickness	-		<del>1</del> 60		.60		.60
iner material	Width	up to mm		120		- 120		- 180
mer materiat		mm						
: la la a a 2)	Thickness Ink side	up to mm	0.	16		.16	U	.16
ibbon²)	Roll diameter					orinside		
		up to mm				80		
	Core diameter Variable length	mm up to m				5.4		
	Width		25	114		- 114	Γ0	- 170
		mm	25 -			- 114 		- 170 
wint madula di	Automatic saving mensions and weights		L	_		Ш		
		mm		24E v 20	10 v 222		24E v 2	00 x 393
Width x Height x Depth mm Weight kg				245 x 300 x 333 245 x				12
	th position indication	kg		11	5		-	1.2
apersensor wit	tii position muication	for	labole nune	h marks or print	marks and and	of material		
•	r rofley from bolow	for					atorial	
		print marks on non-transparent liner materials and end of material  5 - 60 5 - 60 5 - 60			60			
laterial passage		mm mm	2					
lectronics		111111						
rocessor 32 bit o	clock rate	MHz			Ω	300		
lain memory (R		MB				156		
ata memory (IF		MB				50		
-	SD memory card (SDHC,					<b>=</b>		
	and date, real-time clock	<i>SDAC</i> <sub>j</sub>				<u>-</u>		
	nen power is switched off							
nterfaces								
	230,400 baud/8 bit							
	device to connect a PC							
thernet 10/100 l	Mbit/s			Pv 6, RawIP prin Zeroconf, SOAP		ГР, FTP, SMTP, SN	MP,	
x USB host on t	he operation panel	for	Service Key	, USB memory s	tick, USB WLAN	stick, USB Bluet	ooth adapter	
x USB host on t	he 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					
oigital I/O interfa	ce 24 VDC with 10 inputs a	ind 11 outputs				•	•	•
0 /	ce 5 VDC with 4 inputs and	· ·				 _		
	witch 10/100 Mbit/s							
perating data								
ower supply			100-240 VA	C, 50/60 Hz, PFC				
ower consumpt	tion			) W / typical 150 V	V / up to 300 W			
emperature / hu		Operation		10 - 85 %, not co				
peratare / Hu		Stock						
		Transport	0 - 60°C / 20 - 85 %, not condensing -25 - 60°C / 20 - 85 %, not condensing					
Approvals				ss A, CB, cULus,				

<sup>&</sup>lt;sup>1)</sup> Limitations may apply to small labels, thin materials or strong adhesives. Critical applications need to be tested.
<sup>2)</sup> The ribbon should at least correspond with the width of the liner material.

■ standard □ option

# Technical data

Colored LCD touch d	isplay Screen d	iagonal " 4.3
	· · ·	on Width x Height px 480 x 272
Setup options		
	Print	Region:
	Labels	- Language
	Ribbon	- Country
	Peel-off	- Keyboard - Time zone
	Apply Interfaces	- Time zone Time
	Error	Display:
		- Brightness
		- Power saving mode
		- Orientation Interpreter
Status bar		interpreter
	Data reception	Bluetooth
	Record datastream	WLAN
	Ribbon warning	Ethernet
	SD memory card plu	
Monitoring	USB memory stick plu	iggeu III Tillile
	Ribbon	Print head
	- Direction of wind	ing - Voltage
	- Pre-warning	- Temperature
	- End of material	- open
	Labels - End of material	Pinch roller open
Test routines	End of material	
System diagnostics	on start-up, includin	g print head detection
Information display,	Status printout	Test grid
test printout,	Fonts list	Label profile
analysis	List of devices	List of events
	WLAN status Record print data on	Monitor mode memory card
Status reports	- Printout of device s	ettings,
	e.g. print lengths a	
		st by software command
	<ul> <li>Display of, e.g., net barcode errors, per</li> </ul>	
Fonts	,	priery errors, etc.
Font types	5 Bitmap fonts:	7 vector fonts:
provided internally	12 x 12 dots	AR Heiti Medium GB-Mono
	16 x 16 dots	CG Triumvirate Condensed Bo Garuda
	16 x 32 dots OCR-A	HanWangHeiLight
	OCR-B	Monospace 821
		Swiss 721
to be stored	TrueType fonts	Swiss 721 Bold
Character sets	Windows-1250 to -12	257
		), 852, 857, 862, 864, 866, 869
	EBCDIC 500	
	ISO 8859-1 to -10 and	1-13 to -16
	WinOEM 720 UTF-8	
	MacRoman	
	DEC MCS	
	KOI8-R	
	Western European	Cyrillic
	Eastern European	Greek
	Chinese simplified	Latin
	Chinese traditional Thai	Hebrew
	illai	Arabic

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

			□ option					
Fonts								
Bitmap fonts	Widths and heights 1 - 3 m	nm						
·	Zoom factors 2 to 10							
	Orientations 0°, 90°, 180°,							
Vector-/ TrueType fonts	Widths and heights 0,9 - 128 mm Continuous zoom							
irue rype ionis	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,							
	- filled or filled with fading							
Graphic formats	PCX, IMG, BMP, TIF, MAC, O	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 Robert Street Stree							
2D and stacked	DataMatrix DataMatrix Rectangle Externor QR code Micro QR code GS1 QR code GS1 QR code GS1 DataMatrix PDF 417 Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F RSS 14 truncated, limited, stacked omni-directional All codes are variable in temodular width and ratio; of the check digit, plain text primare options depending from	, stacked, erms of height, rrientations 0°, 90°, ntout and start / sto	op 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 Server 2008 Windows 8 Server 2012 Windows 8.1 Server 2012 Windows 10 Server 2016 Server 2019							
Apple Mac OS X printer drivers	from version 10.6	- J						
Linux	from CUPS 1.2							
printer drivers	IScript printer language							
Programming	JScript printer language abc Basic Compiler		ļ.					
Integration	SAP Database Connector							
Emulation	ZPL (Datastream to be tes	sted in advance)						
Administration	Printer control							
	Configuration in Intranet a Network Manager (in prep							

### 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

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.



#### Windows<sup>1)</sup> drivers

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



#### Mac OS X<sup>2)3)</sup> drivers

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



#### Linux<sup>3)</sup> 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 contr

**ABC** 

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's<sup>4)</sup> 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

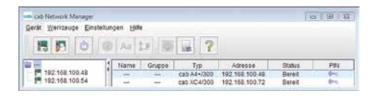
allows printer control and configuration, firmware updates and memory card administration. Via email or SNMP, the SNMP and SMTP client datagram sends status, warning and error messages to administrators and users. Time and date are synchronized by a time server.



## Network Mai

#### 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.



- $^{\mbox{\tiny 1)}}$  Windows is a registered trademark of Microsoft Corporation
- <sup>2)</sup> 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+F, length 1.8 m, Connecting cable USB, length 1.8 m				
DVD:	Windows Vista Windows 7 Windows 8 Windows 8.1 Windows 10  cablabel S3 Lite and	al DE/EN/FR EN EN al EN vers WHQL certified for Server 2008 Server 2012 Server 2012 Server 2012 R2 Server 2016 Server 2019			

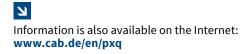
# Delivery program

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	1	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
2.0		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

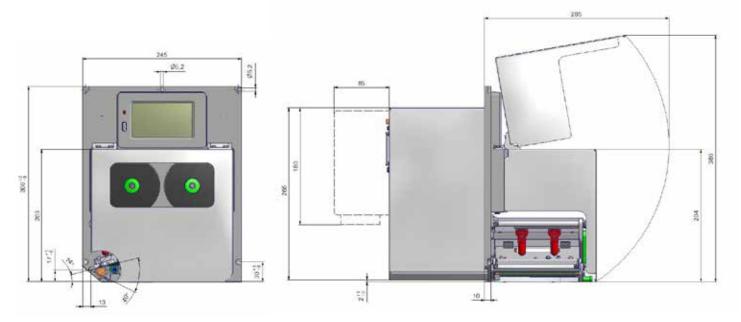
Pos.	Part no.	Label software
Pos.	5588001 5588100 5588101 5588150 5588151	cablabel S3 Lite (Download at cab.de/en)  cablabel S3 Pro, 1 WS cablabel S3 Pro, 5 WS cablabel S3 Pro, 10 WS cablabel S3 Pro, 1 add. licence cablabel S3 Pro, 4 add. licences
11.9	5588152 5588002 5588105 5588106 5588155 5588156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

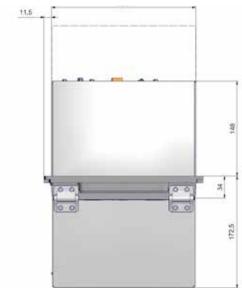
Scopes of delivery, design and technical specifications correspond to the date of the printing. Subject to change. The data provided in the catalog do not represent any warranty or guarantee.



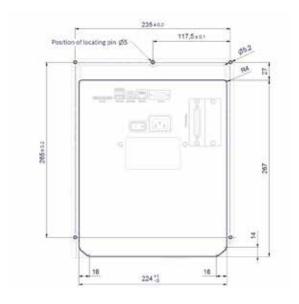


# Dimensions





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

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

**Label printers MACH 4S** 

where little space is available



**Label printers XC** 

for two-color printing



**Print modules PX** 

to be integrated in labeling machines



Label dispensers HS, VS

for horizontal or vertical dispense



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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