

HERMES Q

Printing labels and applying them automatically in production lines



The slim one

to print small labels

Label printer		HERMES Q2	
Printable resolution	dpi	300	600
Print speed	up to mm/s	300	150
Print width	up to mm	56.9	54.1
Label roll outside diameters	mm	205 / 305	
Label width	up to mm	58	



The universal one

An industrial bestseller, providing a wide range of accessories

Label printer		HERMES Q4.3		HERMES Q4	
Printable resolution	dpi	200	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
Label roll outside diameters	mm	205 / 305			
Label width	up to mm	114			



The wide one

to print Odette, UCC and GS1 labels in logistics applications

Label printer		HERMES Q6.3	
Printable resolution	dpi	200	300
Print speed	up to mm/s	250	250
Print width	up to mm	168	162.6
Label roll outside diameters	mm	205 / 305	
Label width	up to mm	174	

Sample applications



Label rolls

All units can provide an unwinder for picking up rolls with maximum diameter either 205 mm or 305 mm.



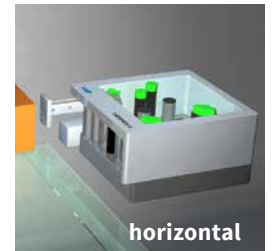
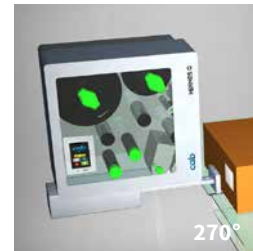
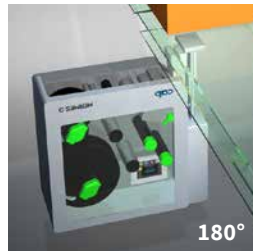
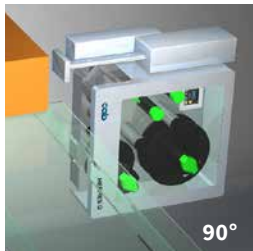
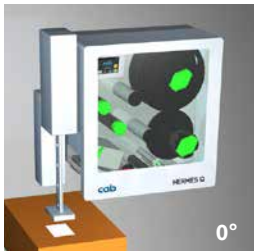
Directions to which dispense labels

All units can be designed for providing labels either to the left or to the right.



Orientations of assembly

All the units can be rotated vertically by at most 360° or assembled in horizontal orientation.



HERMES Q in detail



1 Operation panel

Self-explanatory symbols are on display. The device can thus be operated intuitively and settings be configured easily.

2 Ribbon holder

On the basis of three-part tightening axes, ribbons can be replaced easily and quickly.

3 Rugged metal chassis

It is made of cast aluminum. All the parts are assembled to it.

4 Applicator

It is assembled to hinge pins. It can be pivoted in case of maintenance or if materials have to be replaced.

5 Pressing plungers

One is fixed near the chassis wall. The second one is pushed to the label margin, as far as necessary to evoke a good print image.

6 Print head

Units of the same width are interchangeable. Replacement requires only few steps.

7 Print roller

It can be removed/inserted quickly in cases of cleaning or wear.

8 Peel-off plate

Pivoting improves labels be applied to packages.

9 Label unwinder

A swing arm and an integral brake enable labels be unwound at constant force.

10 Liner rewinder

Subsequent to all the labels been dispensed, the entire liner tape is rewound. On the basis of a three-part tightening axle, a liner tape can be inserted and removed easily.

11 Pulling system

A liner tape is clamped between a draw roller and a pinch roller. Labels are dispensed using feed synchronous to the print roller.

12 Label sensor

Imprint is precisely set on spot on a label and materials ending detected by a transmissive or a reflective sensor.

Accurate imprint

The smaller a label, the higher are the demands regarding the accuracy of an imprint. Print offset can be reduced by ± 0.2 mm using adjustable slip correction.

Print heads



Units of the same width are interchangeable.
They are detected by the CPU automatically and calibrated.
The print distance to the locating edge can be adjusted.

Major data such as the operational performance, maximum operating temperature and heat energy are recorded on the print head. Data can be read at the factory.

Print heads provided for HERMES Q2, HERMES Q4 - 300, 600 dpi

- sharp-edge print images
- e.g. when printing small fonts and graphics on typeplates
- e.g. when printing on materials requires high energy needs

Print heads provided for HERMES Q4.3, HERMES Q6.3 - 200, 300 dpi
 persistent; when labeling in rough settings and thermal direct method

Print rollers



Two types of materials:

Print rollers DR

providing a synthetic rubber coating
 They enable highly accurate imprint and are provided by default.

Print rollers DRS

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

Interfaces



- 1 Slot to insert a **SD memory card**
- 2 **2 USB hosts** to connect a service key, USB memory stick, keyboard, barcode scanner, USB WLAN stick, warning light, an external operation panel
- 3 **USB 2.0 Hi-Speed** to connect a PC
- 4 **Ethernet 10/100 Mbit/s**
- 5 **RS232C** 1,200 to 230,400 baud /8 bits
- 6 **Digital I/O interface;** socket connector SUB-D, 25 pins compliant with IEC/EN 61131-2, types 1+3;
 All the inputs and outputs are isolated galvanically and protect from reverse polarity. In addition, outputs are short-circuit proof

PNP inputs

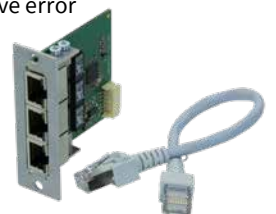
Start printing or labeling
 Print first label
 Reprint
 Delete print job
 Label removed
 Stop printing or labeling
 Label feed
 Label rotated by 90°
 (to be applied by applicator 4214)
 Pause
 Reset

PNP, NPN outputs

Device ready
 Print data available
 Initial / upper end position
 Paper feed ON
 Label in transfer position
 Label application / lower end position
 Pre-warning to a ribbon ending
 Pre-warning to a label web ending
 End of a ribbon and/or a label web
 Collective error

Option:

- 7 **2 port Ethernet switch 10/100 Mbit/s**









Operation panel

Self-explanatory symbols are on display. The device can thus be operated intuitively and settings be configured easily.

- 1 **LED:** Power ON
- 2 **Status bar:** data reception, record data stream, pre-warning to a ribbon ending, SD memory card / USB memory stick plugged in, WLAN, Ethernet, USB slave, time
- 3 **Printer status:** ready, pause, number of labels printed in a print job, label in transfer position, awaiting external start signal
- 4 **USB slot** to connect a service key or a memory stick, to transfer data to the IFFS memory

5 Operation

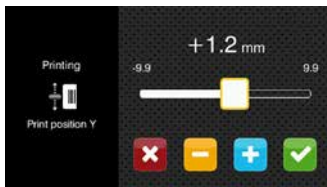
-  Printing and applying labels in individual steps
-  Jump to menu
-  Reprint the latest label
-  Interrupt and continue a print job
-  Stop and delete all print jobs
-  Label feed



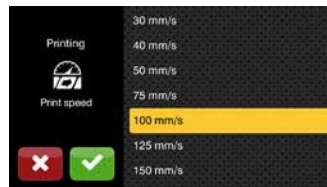
Setup options



Print parameters



Print offset Y



Print speeds

Landscape or portrait display, depending from the orientation of assembly



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.










Accessories

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

Pos.	Designation	roll Ø	205	305	1.1	1.2		1.3
					HERMES Q2	HERMES Q4.3	HERMES Q4	HERMES Q6.3
2.1	SD memory card		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.2	USB memory stick		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.3	USB WLAN stick		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.4	USB WLAN stick including a rod antenna		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.6	Product sensor, 3 pins		●	●	-	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.7	Product sensor, 25 pins		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.8	I/O interface connector SUB-D, 25 pins		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.9	Warning light		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.10	External operation panel		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Connecting USB cable		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.11	Label selection - I/O box		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.12	Hand switch TR2		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.13	Foot switch		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.14	Connecting RS232 C cable		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.15	Scanner CC200		●	●	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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		Product sensor, 3 pins to be attached to a front side applicator, a vacuum belt applicator or an air jet box. Labels are triggered to be applied as soon as a product has been detached, e.g. on a conveyor belt.
2.7		Product sensor, 25 pins Labels are triggered to be applied as soon as a product has been detached, e.g. on a conveyor belt.
2.8		I/O interface connector SUB-D, 25 pins All control signals can be attached to the I/O interface using clamping screws.
2.9		Warning light In addition to the information indicated on the display of a printer, states are signalled. Red Collective error Yellow Pre-warning to a label web or a ribbon ending Green Device ready USB cable (1 m) to connect to HERMES Q Assembly materials are provided for vertical printer installation only. 1 Chassis assembly 2 Bracket assembly

2.10		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 cab provides specified connecting USB cables for power supply. Lengths are 1.8 m to 16 m.
2.11		Label selection - I/O box A maximum of 16 different labels can be selected from a memory card by a master control unit, e.g. PLC.
2.12		Hand switch TR2 to be attached to the I/O interface
2.13		Foot switch to be attached to the I/O interface
2.14		Connecting RS232 C cable 9/9 pins, 3 m
2.15		Scanner CC200 provided on request

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.

Pos.	Designation	roll Ø	205	305	HERMES Q2	HERMES Q4.3	HERMES Q4	HERMES Q6.3	.250	.001	.486	.488
3.1	Automatic ribbon saving		●	●	-	□	□	□	●	-	-	-
3.2	UHF RFID module RS		●	●	-	□	□	□	●	-	●	-
	UHF RFID module HS		●	●	-	□	□	□	●	-	-	●
3.3	Label unwinder K40		●	●	□	□	□	□	●	●	-	-
3.4/3.5	Adapters 40/50 and 76/100		●	●	□	□	□	□	●	●	-	-
3.6	Spacers		●	-	□	□	□	-	●	●	-	-
3.7	Margin stop 10		●	-	□	□	□	□	●	●	-	-
3.8	Cover		●	-	□	□	□	□	●	●	-	-
3.9	Print head pressure system, reduced force		●	●	□	□	-	□	●	●	-	-
3.10	Extended peel-off plate (+10 mm)		●	●	□	□	□	□	●	●	-	-
3.11	Print roller DRS		●	●	□	□	□	□	●	●	-	-
3.12	Antistatic brush		●	●	□	□	□	-	●	●	-	-
3.13	Draw roller ZS		●	●	□	□	□	□	●	●	-	-
3.14	Interface for plugging an external label sensor		●	●	□	□	□	□	●	●	-	-
3.15	2 port Ethernet switch 10/100 Mbit/s		●	●	□	□	□	□	●	●	-	-
3.16	Label sensor, modified		●	●	□	-	-	-	●	●	-	-



3.1

assembly
ex factory only

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.



3.2

assembly to
a printer ex factory
excludes automatic
ribbon saving

UHF RFID module

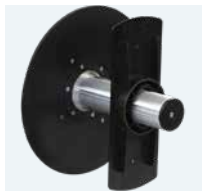
Read/write antennas are assembled directly to a print head or a feeding unit. Using a 4214 applicator enables defective labels be ejected.



See information on www.cab.de/en/rfid



3.3



3.4

Adapter 40/50

to pick up label rolls having a core diameter of 50 mm and minimum widths of 20 mm. One adapter is sufficient if material width does not exceed 50 mm.



3.5



Adapter 76/100

to pick up label rolls having a core diameter of 100 mm and minimum widths of 20 mm. One adapter is sufficient if material width does not exceed 50 mm.



3.7



3.16

Spacers

to process narrow labels provided on liners ≤ 20 mm wide, wound on a roll or a reel.

Ribbon protruding on both sides prevents from wrinkling. The label guidance is therefore offset by 7 mm from the middle wall with spacers.

A modified label sensor is included on delivery.

Reel plate wall thickness 1 - 2 mm

Label sensor, modified

Provided for labels requiring a sensor distant up to 26 mm to the locating edge. This sensor cannot be fixed with a screw.

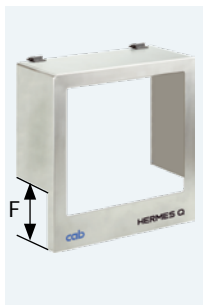
Margin stop 10

to guide narrow labels provided on a liner 10 - 24 mm wide, wound on a roll (no reels) having a core diameter of 76 mm.

Operate only with a spacer

Options

3.8



Cover

to prevent from contamination and contact
 Maximum outside diameter for label rolls is 205 mm
 Assembly in vertical orientation, rotated by $\pm 90^\circ$ or horizontally
 Depth of a pad immersing Dim. F

	Dimension F mm		
	Standard	Optional	on request
HERMES Q2	60	100	up to 120
HERMES Q4/Q4.3	60	100	up to 120
HERMES Q6	25	-	up to 120

3.9



Print head pressure system, reduced force

Thermal direct printing requires less pressure on a print head.
 Reduced force results in a decrease of wear. Product life extends.

Thermal direct printing only

3.10



Extended peel-off plate (+10 mm)

Recommended

- if labels are picked up by a robotic arm,
- if readable area is required for scanning,
- when installing an antistatic brush

3.11



Print roller DRS

Silicone coating enables an extra long product life,
 taken a higher print offset into account

3.12



Antistatic brush

Electrostatic charge is reduced when plastic labels
 are printed and peeled off.

Operate only with an extended peel-off plate.

3.13



Draw roller ZS

Made of steel, to avoid tension on a liner tape:

- if label height exceeds 150 mm
- when peeling off without backfeed
- if thick liner materials are processed
- when applying labels using a demand module 5114/16

3.14



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

3.15



2 port Ethernet switch 10/100 Mbit/s

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

Technical data

● typical ■ standard □ option

Label printer		type	HERMES Q2		HERMES Q4.3		HERMES Q4		HERMES Q6.3		
Printing method	Thermal transfer		●	●	●	●	●	●	●	●	
	Thermal direct		-	-	●	●	-	-	●	●	
Printable resolution	dpi		300	600	200	300	300	600	200	300	
Print speed	up to mm/s		300	150	300	300	300	150	250	250	
Print width	up to mm		56.9	54.1	104	108.4	105.7	105.7	168	162.6	
Print length	up to mm		12,000	3,000	13,500	6,000	6,000	1,500	9,000	4,000	
Direction to which dispense labels			L = to the left, R = to the right								
Print distance to the locating edge	mm		1	1	1	1	1	1	1	1	
incl. automatic ribbon saving L / R mm			-	-	2.2 / 1.6	0 / -0.7	1 / 1	1 / 1	0.2 / 0.2	2.9 / 2.9	
UHF RFID											
UHF RFID module			-	-	□	□	□	□	□	□	
Materials											
Labels			paper, PET, PE, PP, PI, PVC, PU, acrylate, Tyvec								
		on a roll	●		●		●		●		
		on a reel	●		-		-		-		
Labels ¹⁾	Width	mm	4 - 58		10 - 114		10 - 114		46 - 174		
	Height	from mm	3		4		4		6		
	Thickness	up to mm	0.60		0.60		0.60		0.60		
Liner tape	Width if operating a roll	mm	24 - 62		24 - 118		24 - 118		50 - 178		
	Width ²⁾ if operating a reel or a roll	mm	10 - 24		-		10 - 24		-		
	Thickness	mm	0.03 - 0.08		0.03 - 0.08		0.03 - 0.08		0.03 - 0.08		
Roll unwinder	Outside roll diameter	up to mm	205 / 305		205 / 305		205 / 305		205 / 305		
	reel diameter	up to mm	205		-		-		-		
	Core diameter	mm	76								
	Winding		outside or inside								
Roll rewinder	Outside diameter	up to mm	155 / 205								
	Core diameter	mm	76								
Ribbon ³⁾	Ink side		outside or inside								
	Roll diameter	up to mm	90								
	Core diameter	mm	25.4								
	Length	up to m	600								
	Width	mm	25 - 67		25 - 114		25 - 114		50 - 170		
	Automatic ribbon saving		-		□		□		□		
Printer dimensions and weights											
Width	mm		207		260		260		320		
Height	roll diameters 205 / 305	mm	400 / 430								
Depth	roll diameters 205 / 305	mm	400 / 500								
Weight	roll diameters 205 / 305	approx. kg	15 / 16		16 / 17		16 / 17		20		
Label sensor indicating positions											
Transmissive sensor	detecting		labels, punch marks or print marks, as well as materials ending								
Reflective sensor	bottom reflex	detecting	print marks on non-transparent liners, as well as materials ending								
Sensor distance to the locating edge	standard	mm	2 - 12		2 - 60		2 - 60		2 - 60		
	modified	mm	2 - 26								
Material passage	mm		2								
Electronics											
32-bit processor	MHz		800								
RAM	MB		256								
IFFS memory	MB		50								
Slot to insert a memory card (SDHC, SDXC)			■								
Battery to display date and real time			■								
Data (e.g. serial numbering) preserved if power turns off			■								
Interfaces											
RS232C	1,200 to 230,400 baud / 8 bits		■								
USB 2.0 Hi-Speed to connect a PC			■								
Ethernet	10/100 Mbit/s		LPD, RawIP printing, SOAP web service, OPC UA, WebDAV DHCP, HTTP/HTTPS, FTP/FTPS, TIME, NTP, Zeroconf, SNMP, SMTP, VNC								
2 USB hosts on the control panel, 2 USB hosts on the back of a unit			Service key, USB stick, USB WLAN stick, USB WLAN stick including a rod antenna, keyboard, barcode scanner, warning light, external control panel								
USB host	24 VDC, to connect a peripheral device		■								
Digital I/O interface, 10 inputs / 11 outputs			■								
Interface for plugging an external label sensor			□								
2 port Ethernet switch	10/100 Mbit/s		□								

¹⁾ Limitations can occur when processing small labels, thin materials or materials using a strong adhesive. Critical applications need testing.

²⁾ Spacers attached to the label unwinder and the unit rewinding the liner tape help feeding the ribbon centered above the labels.

³⁾ The ribbon must correspond at least to the width of the liner tape.

Technical data

■ standard □ option

Operating data	
Voltage	100-240 VAC, 50/60 Hz, PFC
Power consumption	standby <10 W / typical 100 W / max. 200 W
Temperature / Operation	+5 - 40°C / 10 - 85 %, not condensing
humidity	Stock 0 - 60°C / 20 - 85 %, not condensing
	Transport -25 - 60°C / 20 - 85 %, not condensing
Approvals	CE, FCC Class A, ICES-3, cULus, CB, RCM Mark, CCC, CoC Mexico, BSMI Mark, KC Mark
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 label Interfaces Error	Region: - Language - Country - Keyboard - Time zone Time Display: - Brightness - Power saving mode - Orientation Interpreter
Status bar	
	Data reception WLAN Record data stream Ethernet Pre-warning to a ribbon ending USB slave SD memory card plugged in Time USB memory stick plugged in
Monitoring	
	Ribbon Direction of winding Pinch roller open Pre-warning Peripheral error Material ending Labels Pre-warning Material ending Print head Voltage Temperature open
Test routines	
System diagnostics	on start-up, the print head is also detected
Information display, print test, analysis	Status printout Test grid List of fonts Label profile List of devices List of events WLAN status Monitor mode Record print data on a memory card
Status reports	- Printout of device settings, e.g. durations of printing and hours in operation - Device status request triggered by software command - Display of network errors, missing links, barcode errors, peripheral errors, etc.
Fonts	
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 Regular, 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 Cyrillic Eastern European Greek Chinese, simplified Latin Chinese, traditional Hebrew Thai Arabic

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 360° orientation in steps of 1°
Font styles	bold, italic, underlined, outline, inverse - depending from the font type
Character spacing	variable or monospace for fixed spacing
Graphics	
Elements	lines, arrows, rectangles, circles, ellipses - filled or filled with fading
Formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG
Codes	
1D barcodes (linear)	Code 39, Code 93 Interleaved 2/5 Code 39 Full ASCII Ident and routing code Code 128 A, B, C of Deutsche Post EAN 8, 13 Codabar EAN/UCC 128/GS1-128 JAN 8, 13 EAN/UPC Appendix 2 MSI EAN/UPC Appendix 5 Plessey FIM Postnet HIBC RSS 14 UPC A, E, E0
2D and stacked codes	DataMatrix DataMatrix Rectangle Extension QR code Micro QR code rMQR code GS1 QR code GS1 DataMatrix GS1 Digital Link (QR and DataMatrix) PDF 417 Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F Dotcode RSS 14 truncated, limited, stacked, stacked omni-directional Heights, modular widths and ratio are variable Orientations 0°, 90°, 180°, 270° Check digit, plain text printout and start/stop coding are options depending from the code type.
Software	
Label software	cablabel S3 Lite ■ cablabel S3 Viewer ■ cablabel S3 Pro □ cablabel S3 Print □
Running also with	CODESOFT Loftware Spectrum NiceLabel BarTender
Stand-alone operation	■
Windows printer drivers certified WHQL for	Windows 10 Server 2016 Windows 11 Server 2019 Server 2022 ■
Apple printer drivers	Mac OS X 10.6 or any later release ■
Linux printer drivers	CUPS 1.2 or any later release ■
Programming	JScript printer language ■ abc Basic Compiler ■ ZPL II (Datastream be tested in advance) □
Integration	SAP ■ Database Connector ■
Administration	Printer control ■ Configuration on the Intranet / Internet ■

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For information see www.cab.de/opensource