

Status: 02/2020



Products need labeling  
Tube labeling system

**AXON 1**  
Made in Germany

# Reliable tube labeling

AXON 1 is in preparation to be available in the second half of 2020.



In order to evaluate analyses reliably and quickly, tubes must be labeled uniquely.

In practice, 2D codes or linear barcodes are printed on self-adhesive labels and the labels are applied on the tubes.

Print resolutions of 300 or 600 dpi, a sharp-edge print image and high contrast enable even tiny 2D codes to be verified. Thermal direct and thermal transfer printing are possible.

AXON 1 suits for labeling tubes individually as a manual workstation or integrated in sample processing systems.

Tubes of diameters 10 to 35 mm can be processed, capped or uncapped. Printing and labeling take less than two seconds.

Self-explanatory symbols enable the device to be operated intuitively. Label rolls and the ribbon are easy to remove. If it comes to cleaning or in cases of wear, print rollers and transport rollers can be replaced easily by the operator with the help of a tool attached.

AXON 1 may be integrated in a Laboratory Information Management System (LIMS). Data transfer from a PC is possible via interfaces such as RS232, USB, Ethernet, or via WLAN.

In stand-alone operation, when no PC is connected, variable data are set with a keyboard or a scanner.

Power is supplied by 110 to 240 VAC voltage or 36 to 60 VDC. 24 VDC voltage may be possible on request.

## Details on tube labeling



For further information see  
[www.cab.de/en/squix](http://www.cab.de/en/squix)



### 1 Ribbon holder

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

### 2 Transport rollers

They apply the labels on the tubes.

### 3 Wipe-down rollers

During labeling, they press the tubes to the transport rollers.

### 4 Operation panel

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

### 5 Internal rewinder

With the help of the rewinder, liner material is wound. Three-part tightening axles enable the material to be replaced quickly and easily.

### 6 Label pre-warning

In case a roll has reached a set diameter, a pre-warning is issued.

### 7 Coated print rollers

synthetic rubber for highly accurate print images

### 8 Peel-off function

Labels are guided over a deflection roller to be applied reliably on the tubes.

### 9 Scanner to detect linear barcodes and 2D codes

Verification and contents are checked by a camera during labeling.

### 10 Rugged metal chassis

made of cast aluminum; basis to assemble all units

# Technical data

Tube labeling system		Typ	AXON 1	
Material guide			left-aligned	
Printing method	Thermal transfer		●	●
	Thermal direct		●	–
Printable resolution	dpi		300	600
Print speed	mm/s		100	100
Print width	up to mm		56.9	54.1
<b>Material</b>				
Tubes	Orientation at labeling		vertical	
	Diameter	mm	10 - 35	
	Length	mm	32 - 130	
	Conicity (change of diameter)	up to %	0.8	
	Label distance from bottom	mm	8 - 38	
Labels	Material	Paper, plastics such as PP, PC		
	Width	mm	10 - 56	
	Height	from mm	12	
	Roll diameter	up to mm	205	
	Core diameter	mm	76	
	Winding		outside	
Liner width		mm	25 - 60	
Ribbon	Ink side		outside or inside	
	Roll diameter	up to mm	80	
	Core diameter	mm	25	
	Variable length	up to m	450	
	Width	mm	25 - 60	
<b>Printer sizes and weight</b>				
Width x Height x Depth		mm	270 x 195 x 560	
Weight		approx. kg	12	
<b>Interfaces</b>				
RS232C		1,200 to 230,400 baud/8 bit		
USB 2.0		Hi-speed device to connect a PC		
Ethernet		10/100 Mbit/s		
1x USB host on the operation panel	for	Service Key, USB memory stick		
2x USB host on the back of the device	for	keyboard, barcode scanner, USB Bluetooth adapter, USB WLAN stick		
Digital I/O interface		8 inputs and outputs are an option <input type="checkbox"/>		
<b>Operating data</b>				
Power supply		100 - 240 VAC, 50/60 Hz, PFC	■	
		36 - 60 VDC, 24 VDC on request	<input type="checkbox"/>	
Power consumption		Standby < 10 W / typical 100 W		
Temperature / humidity	Operation	+5 - 40°C / 10 - 85 %, not condensing		
	Stock	0 - 60°C / 20 - 85 %, not condensing		
	Transport	-25 - 60°C / 20 - 85 %, not condensing		
Approvals		CE, FCC Class A, ICES-3, cULus, CB		
<b>Operation panel</b>				
Colored LCD touch display	Screen diagonal	"	4.3	
	Resolution W x H	px	272 x 480	
<b>Monitoring</b>				
Printer	Ribbon winding	Print head voltage		
	Ribbon pre-warning	Print head temperature		
	Ribbon ending	Print head open		
	Label pre-warning <input type="checkbox"/>	Pinch roller open		
	End of labels	Cover open <input type="checkbox"/>		
Applicator	Barcode scanner <input type="checkbox"/>	Peripheral error		
	Applicator pivoted no tube available	wrong tube diameter		
<b>Fonts</b>				
Font types internally provided	5 bitmap fonts: 12 x 12 dots 16 x 16 dots 16 x 32 dots OCR-A OCR-B	7 vector fonts: AR Heiti Medium GB-Mono CG Triumvirate Condensed Bold Garuda HanWangHeiLight Monospace 821 Swiss 721 Swiss 721 Bold		
	to be stored	TrueType fonts		

● typical ■ standard □ option

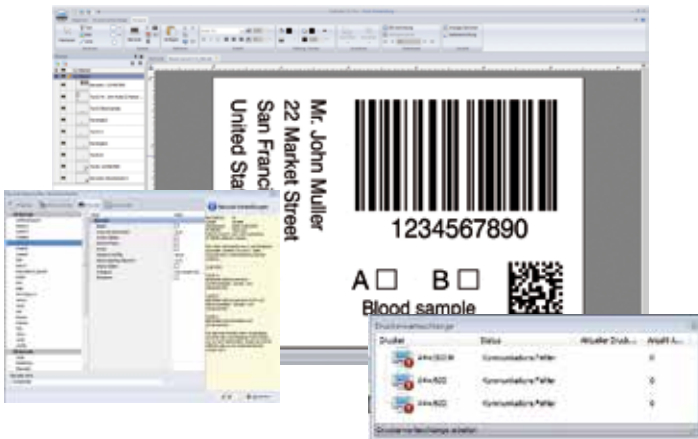
<b>Fonts</b>			
Character sets	Windows-1250 to -1257 DOS 437, 737, 775, 850, 852, 857, 862, 864, 866, 869 EBDIC 500 ISO 8859-1 to -10 and -13 to -16 WinOEM 720 UTF-8 Macintosh Roman DEC MCS KOI8-R		
	Western European Eastern European Chinese simplified Chinese traditional Thai	Cyrillic Greek Latin Hebrew Arabic	
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 Variable zoom Orientation 360° in steps of 1°		
Font styles	bold, italic, underlined, outline, inverse - depending from the font types		
Character spacing	variable or monospace		
<b>Graphics</b>			
Graphic elements	Lines, arrows, rectangles, circles, ellipses - filled or filled with fading		
Graphic formats	PCX, IMG, BMP, TIF, MAC, GIF, PNG		
<b>Barcodes</b>			
Linear	Code 39, Code 93 Code 39 Full ASCII Code 128 A, B, C EAN 8, 13 EAN/UCC 128/GS1-128 EAN/UPC Appendix 2 EAN/UPC Appendix 5 FIM HIBC	Interleaved 2/5 Ident and routing code of Deutsche Post Codabar JAN 8, 13 MSI Plessey Postnet RSS 14 UPC A, E, E0	
	2D and stacked	DataMatrix DataMatrix Rect. Extension QR-Code Micro QR-Code GS1 QR-Code GS1 DataMatrix PDF 417	Micro PDF 417 UPS MaxiCode GS1 DataBar Aztec Codablock F Dotcode RSS 14 truncated, limited, stacked/omnidirectional
	All codes are variable in terms of height, modular width and ratio; orientations 0°, 90°, 180°, 270° check digit, plain text printout and start / stop code are options depending from the type of code		
<b>Software</b>			
Label software	cablabel S3 Lite	cablabel S3 Viewer	■
	cablabel S3 Pro	cablabel S3 Print	<input type="checkbox"/>
Also running with	CODESOFT, NiceLabel, BarTender		
Stand-alone operation	<input type="checkbox"/>		
Windows printer drivers WHQL certified for	Windows Vista	Server 2008	■
	Windows 7	Server 2008 R2	
	Windows 8	Server 2012	
	Windows 8.1	Server 2012 R2	
	Windows 10	Server 2016 Server 2019	
Apple Mac OS X printer drivers	from version 10.6		■
Linux printer drivers	from CUPS 1.2		■
Programming	JScript printer language	abc Basic Compiler	■
Integration	SAP	Database Connector	■
Emulation	ZPL (Datastream to be tested in advance)		<input type="checkbox"/>
Administration	Printer control		■
	Configuration in Intranet and Internet Network Manager (in preparation)		■

cab uses free and Open Source Software in its products.  
For information see [www.cab.de/opensource](http://www.cab.de/opensource)

## Label software

### cablabel S3 - design, print, administrate

cablabel S3 opens up the full potential of cab devices. At first, a label must be defined. Its modular design enables cablabel S3 adapt to requirements step by step. Embedded plug-ins like the JScript Viewer support features such as native JScript programming. The designer user interface synchronizes in real time, so are JScripts codes. Integrating the Database Connector or a barcode verifier are options.



For further information see  
[www.cab.de/en/cablabel](http://www.cab.de/en/cablabel)

## Stand-alone printing

Deciding for this operating mode enables a printer to select and print labels even when there is no host system connected. Labels can be designed using software such as cablabel S3 or programmed in a text editor directly on a PC. Data such as label formats, texts, graphics, as well as contents from a database can be stored on a memory card, a USB memory stick or in the printer's internal IFFS memory. Only variable data are sent by a keyboard, a barcode scanner, a scale or any other host system to a printer to be printed. It may also be recalled by the Database Connector from the host and printed.



## Printer control



### Drivers

cab provides 32 / 64 bit drivers to control a printer with software other than cablabel S3.



To run the drivers, operating systems need to be at least Windows Vista, Mac OS 10.6 and Linux CUPS 1.2.



Drivers are provided on a DVD included in the scope of delivery of a printer, and for free download on [www.cab.de/en/support](http://www.cab.de/en/support)

## Programming



### JScript

cab printers embed the JScript programming language. Free manual download on [www.cab.de/en/programming](http://www.cab.de/en/programming)



### abc Basic Compiler

abc in addition to JScript and as an integral firmware component enables advanced printer programming before data are edited for printout. For example, external printer languages can be replaced without intervening in the print application in progress. Data may be imported as well from other systems such as scales, barcode scanners or a PLC.

## Integration



### Printer Vendor Program

cab as a partner in this program developed a replace method to control cab printers from SAP2) R/3 using SAPScript. Only variable data are sent by a host system to a printer. They unite on the printer with the images and fonts that have been stored in the local memory (IFFS, memory card, etc.).

## Printer administration



### Configuration in the Intranet and Internet

cab printers integrate a HTTP and FTP server. By this, a printer can be controlled and configured, firmware updated and memory cards managed using standard applications such as web browsers or FTP clients. Using SNMP/SMTTP clients, the attention of administrators or operators is drawn to warnings and errors via email or SNMP datagrams. Time and date are synchronized using a time server.



### Network Manager in preparation

Several printers can be managed simultaneously in a network, controlled and configured from one place. So are firmware updates, memory card management, data synchronization and PIN administration.






### Database Connector

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

<sup>1)</sup> Windows is a registered trademark of Microsoft Corporation

<sup>2)</sup> SAP and all corresponding logos are trademarks or registered trademarks of SAP SE

# Delivery program

Pos.	Part no.	Tube labeling system
1.1		<b>5979600</b> Tube labeling system AXON 1/300 100-240 VAC
		<b>5979740</b> Tube labeling system AXON 1/600 100-240 VAC
		<b>5979745</b> Tube labeling system AXON 1/300 36-60 VDC, 24 VDC on request
		<b>5975750</b> Tube labeling system AXON 1/600 36-60 VDC, 24 VDC on request
		<b>5977767</b> Digital I/O interface
		<b>5570200</b> Scanner CC200
		<b>5979765</b> Label pre-warning
		<b>5561500</b> System adjustment and test
<b>Scope of delivery</b>		
<b>DVD:</b>	Tube labeling system Power cable Type E+F, length 1.8 m Connecting cable USB, length 1.8 m Instructions DE/EN Instructions Configuration manual DE/EN/FR Service manual DE/EN Spare parts list DE/EN Programming manual EN WHQL certified Windows printer drivers for Windows Vista Server 2008 Windows 7 Server 2008 R2 Windows 8 Server 2012 Windows 8.1 Server 2012 R2 Windows 10 Server 2016 Server 2019 Apple Mac OS X printer drivers DE/EN/FR Linux printer drivers DE/EN/FR Label software cablabel S3 Lite cablabel S3 Viewer Database Connector	

Pos.	Part no.	Accessories
2.7		<b>5977370</b> SD memory card 8 GB
2.8		<b>5977730</b> USB memory stick 8 GB
2.9		<b>5978912.001</b> USB WLAN stick 2.4 GHz 802.11b/g/n
2.10		<b>5977731</b> USB WLAN stick with a rod antenna 2.4 GHz 802.11b/g/n + 5 GHz a/n/ac
2.11		<b>5977732</b> USB Bluetooth adapter
3.2		<b>5917651</b> I/O interface connector SUB-D 25 pins
3.4		<b>5955710</b> Hand switch TR2
4.1		<b>5550818</b> Connecting cable RS232C 9/9 pins, length 3 m



# Check list tube labeling system AXON 1

Send the completed form to your cab contact person  
or email to [info@cab.de](mailto:info@cab.de)



Checklist download:  
[www.cab.de/en/axon1-conf](http://www.cab.de/en/axon1-conf)

Customer / no. \_\_\_\_\_  
 Person in charge \_\_\_\_\_  
 Phone \_\_\_\_\_  
 Street \_\_\_\_\_  
 Zip code / City \_\_\_\_\_  
 Email \_\_\_\_\_

Date of issue \_\_\_\_\_  
 Target date \_\_\_\_\_  
 Project owner \_\_\_\_\_  
 Project controlling \_\_\_\_\_  
 Configurator no. \_\_\_\_\_  
 (filled in by cab)

1. **Label** Width B \_\_\_\_\_ mm  
 Height H \_\_\_\_\_ mm  
 Type of material \_\_\_\_\_  
 Width of liner tape T \_\_\_\_\_ mm

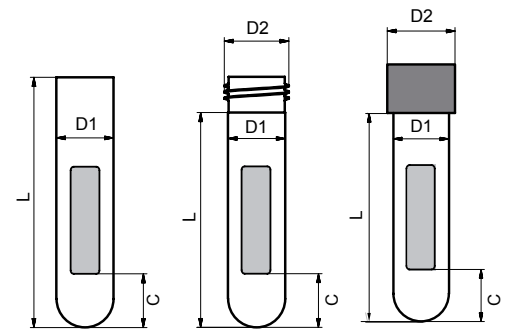
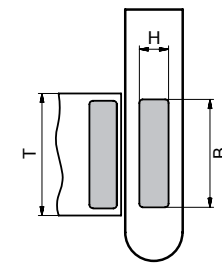
2. **Printing method** 2.1  Thermal direct  
 2.2  with a ribbon

3. **Ribbon** Width \_\_\_\_\_ mm  
 Type of material \_\_\_\_\_  
 Winding  inside  outside

4. **Tubes** Diameter D1 \_\_\_\_\_ mm  
 Diameter D2 \_\_\_\_\_ mm  
 Length L \_\_\_\_\_ mm  
 Distance C \_\_\_\_\_ mm

5. **Tube labeling system**

- 5.1  5979600.xxx Tube labeling system AXON 1/300 100 - 240 VAC
- 5.2  5979740.xxx Tube labeling system AXON 1/600 100 - 240 VAC
- 5.3  5979745.xxx Tube labeling system AXON 1/300 36 - 60 VDC
- 5.4  5979750.xxx Tube labeling system AXON 1/600 36 - 60 VDC
- 5.5  5977767 Digital I/O interface
- 5.6  5570200 Scanner CC200
- 5.7  5570200 Label pre-warning



Filled in by cab:

**practicable**  yes  no

**Name** \_\_\_\_\_  
**Phone** \_\_\_\_\_  
**Email** \_\_\_\_\_  
**Part no.** \_\_\_\_\_ **Name** \_\_\_\_\_  
**Date** \_\_\_\_\_ **Signature** \_\_\_\_\_

**Customer approval required after practicability check:**

yes  no

**Name** \_\_\_\_\_  
**Phone** \_\_\_\_\_  
**Email** \_\_\_\_\_  
**Date** \_\_\_\_\_ **Signature** \_\_\_\_\_

**System adjustment and check:**

To do this, we need to have approx. 100 tubes  
 1 label roll  
 1 ribbon roll

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