



Desk reader for barcode bottles

Type 6727-61

Operating instruction

BA 021212

	Contents	Page	Modification date
1	Device description _____	1-1	
1.1	Task _____	1-1	
1.2	Construction _____	1-1	
1.3	Interfaces and connections _____	1-2	
1.4	Technical data _____	1-3	
2	Safety requirements _____	2-1	
3	Installation _____	3-1	
3.1	Voltage supply _____	3-1	
3.2	Connection to the PC _____	3-1	
3.2.1	Connection via RS 232 _____	3-1	
3.2.2	Connection via keyboard interface _____	3-2	
3.3	Replace the connecting cable _____	3-2	
4	Operation _____	4-1	
4.1	Configuration of the terminal program _____	4-1	
4.2	Configuration (initialization) for devices with RS 232 interface _____	4-3	
4.3	Configuration (initialization) for devices with keyboard interface _____	4-4	
4.4	Read barcodes _____	4-5	
5	Maintenance _____	5-1	
5.1	Clean the container _____	5-1	
5.2	Clean the window of the barcode reader _____	5-1	
5.3	Replace the fuse _____	5-2	
6	Appendix _____	6-3	
6.1	Configuration tags for devices with RS 232 interface _____	6-3	
6.2	Configuration tags for devices with keyboard interface _____	6-5	
6.3	Configuration for barcode type Code128 _____	6-7	

*All rights and changes reserved.
Neither the whole document nor any part of it may be
reproduced or transmitted in any form or by any means
without the express written permission of BARTEC.*

Copyright © 2000 by
BARTEC GmbH
Schulstraße 30
D-94239 Gotteszell

Document: BA 021212
Revision:
Authors: R. Kopp/ G. Rothe
Translator: Evi Bauernfeind

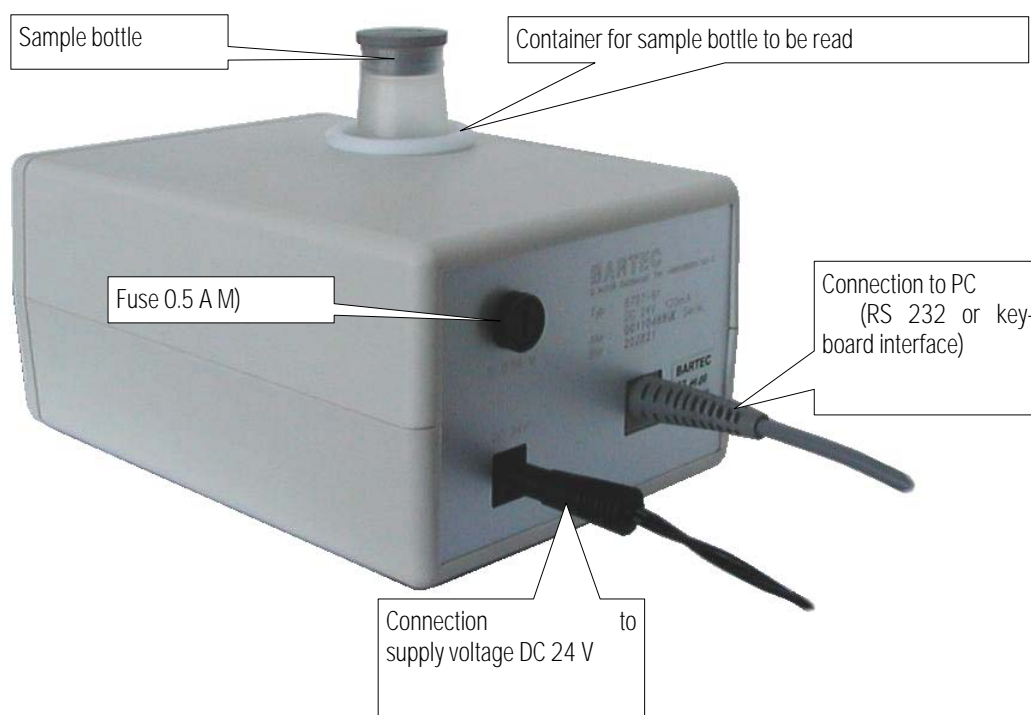
Valid as from: 12.00
Updated:

1 Device description

1.1 Task

The device serves to read milk sample bottles equipped with barcode tags (Interleave 2/5, ten digits). The device is connected to a commercial PC via the RS 232 interface or via the keyboard interface.

1.2 Construction



1.3 Interfaces and connections



RS232 connection: Standard PC RS232 connection 9-pole
Assignment:

SUB-D 9pol.	Designation
Pin 1	not assigned
Pin 2	TxD
Pin 3	RxD
Pin 4	not assigned
Pin 5	GND
Pin 6	not assigned
Pin 7	CTS
Pin 8	RTS
Pin 9	not assigned

1.4 Technical data

Technical data		
Mechanical data		
Housing	PS housing	
Dimensions	195mm length x 135mm width x 100mm height	
Weight	1.0 kg (excluding plug-in power supply unit)	
Protective system	IP 54	
Ambient conditions		
Admissible operating temperature	0 ... + 50 °C	
Admissible storage temperature	- 10 ... + 70 °C	
Climatic class	KWF to DIN 40040 (average air humidity 75%, no condensation)	
Electrical data		
Input voltage	DC 24 V ± 10 %	
Input current	max. 120 mA	
Power supply	Plug-in power supply unit (DC 24 V/340 mA)	
Device-specific data		
Readable barcodes	2/5 Interleave, 10 digits (other versions available on request)	
Processing rate	< 4 sec per bottle	
Interface		
Serial interface or Keyboard interface	RS 232 9 pol. Sub-D IBM AT/XT oder IBM PS/2	9,600 baud, no parity, 8 data bits, 1 stop bit, no handshaking Enter the barcode by means of keyboard simulation
Pin assignment		
Power unit	Extra low voltage plug, 2-pole in compliance with DIN 45323 + 24 V outside 0 V inside	
RS-232 connection		
Assignment	<u>SUB-D 9-pole</u> Pin 2 Pin 3 Pin 5 Pin 7 Pin 8	<u>Designation</u> TXT RXT GND CTS RTS
Keyboard IMB PC XT/AT (DIN)		
Assignment	<u>5-pole plug</u> Pin 1 Pin 2 Pin 3 Pin 4 Pin 5	<u>Assignment</u> CLK Data Reset GND + 5 V
Keyboard IBM PC PS/2		
Assignment	<u>6-pole plug</u> Pin 1 Pin 2 Pin 3 Pin 4 Pin 5 Pin 6	<u>Assignment</u> Data nc GND + 5 V CLK nc

Ordering designations		
Order no.	Desk reader for barcode bottles, keyboard (XT/AT)	2 028 21
	Desk reader for barcode bottles, RS 232	2 028 22
Spare parts	Connecting cable: RS 232	2 025 27
	Connecting cable: keyboard IBM XT/AT	2 042 24
	Connecting cable: keyboard IBM PS/2	2 060 37
	Barcode interface	2 025 26
	Plug-in power supply unit 230 V/24 V, 0.30 A hollow plug., type 4312-8.2	U 010 1 143 1282
	Plug-in power supply unit 115 V/24 V, 0.30 A hollow plug., type 4312-8.2	U 010 1 243 1282
	Bottle guiding device, type 6727-00-059	2 037 05
	Bottle carrier, type 6727-00-60	2 037 06

2 Safety requirements

The appliances have been built conforming to the statutory regulations and, after having been thoroughly checked, have left the factory in perfectly sound condition.

- The appliances have to be installed and maintained by skilled staff.
- Make sure that the data and operating conditions specified by BARTEC are complied with.
- Before installing the device and taking it into service, please read the operating instruction. If you have any questions on certain issues, you will get detailed information by our staff.
- Before connecting the supply voltage, make sure that the operating voltage of the appliance conforms with the mains voltage.
- Switch off the device immediately and protect it from being switched on again if there is the risk that it can't be operated without danger any more (e.g. when there are visible damages).
- Make sure that no liquids can get into the the housing!

Disclaimer

BARTEC will not be responsible for damages resulting from the fact that safety instructions aren't observed or that the operating instruction or the operating conditions are disregarded.

3 Installation

3.1 Voltage supply

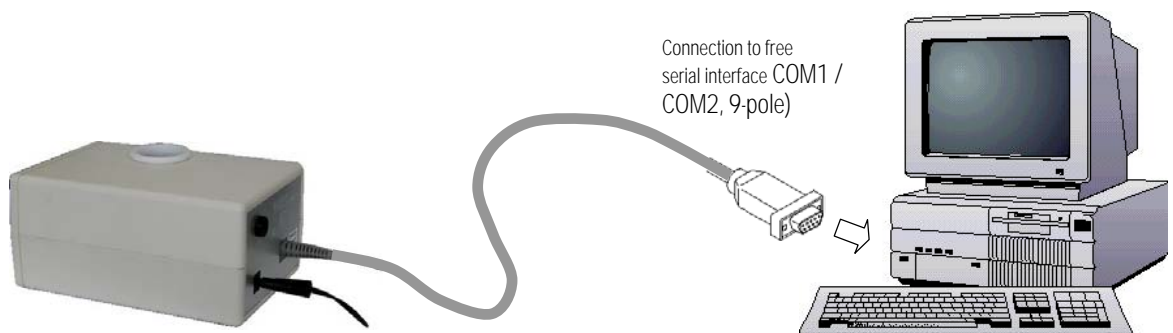
The device is supplied with 24 V DC via the plug-in power supply unit included in delivery.

3.2 Connection to the PC

The device can be connected to the PC either via the serial interface of the PC or via the keyboard interface. The appropriate interface type is determined by the connecting cable in the barcode reader. To change the interface type, the cable can be replaced (see 3.3).

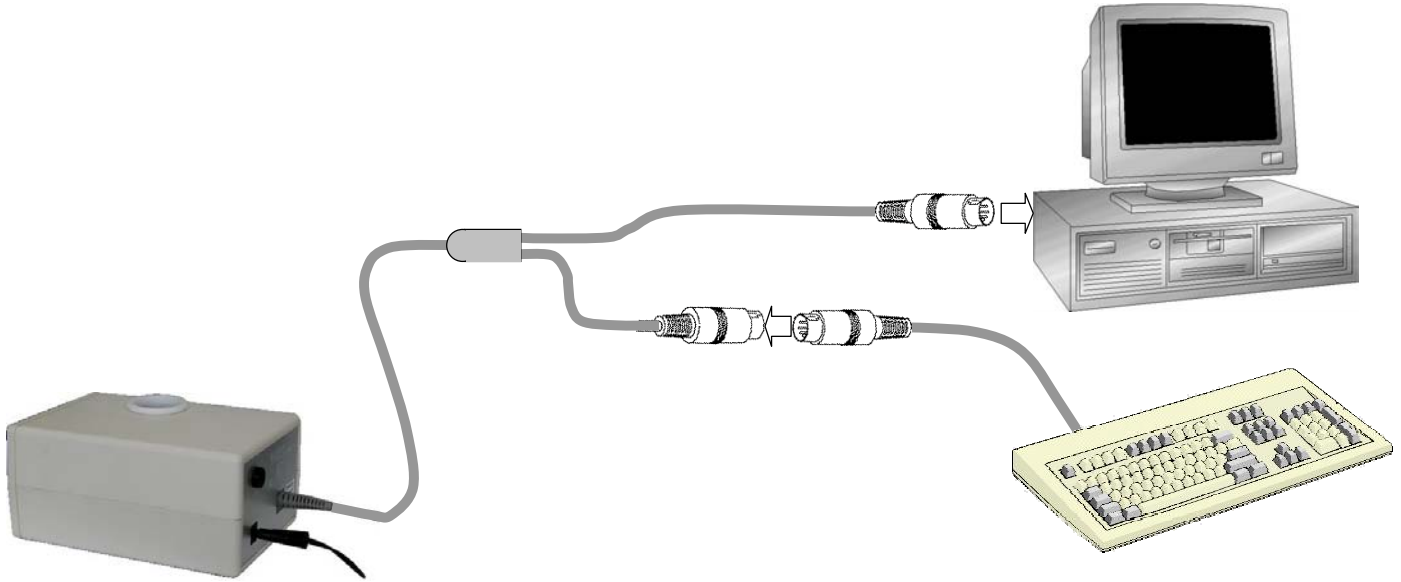
3.2.1 Connection via RS 232

The device is connected to the PC via the RS 232 with a 9-pole cable. If the serial interface of the PC is 25-pole, an appropriate adapter plug has to be used.



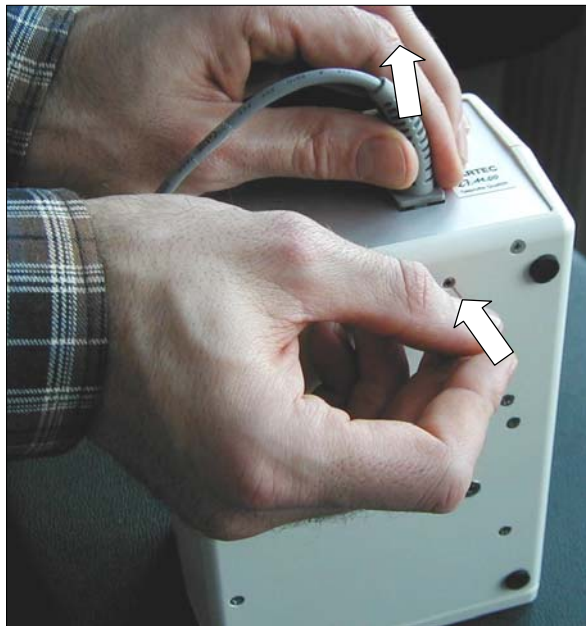
3.2.2 Connection via keyboard interface

If it is connected via the keyboard interface, the barcode reader is inserted between the PC and the keyboard. XT/AT plugs or PS/2 plugs are available.



3.3 Replace connecting cable

To change the interface type of the barcode reader, the connecting cable has to be replaced (for connecting cable types see ordering designations). Cautiously insert a thin stiff wire (e.g. a paper clip that has been straightened out) into the opening at the underside of the housing and push back the lock of the interface cable. At the same time draw the cable out of the outlet box. Plug in the new cable until it snaps into place.



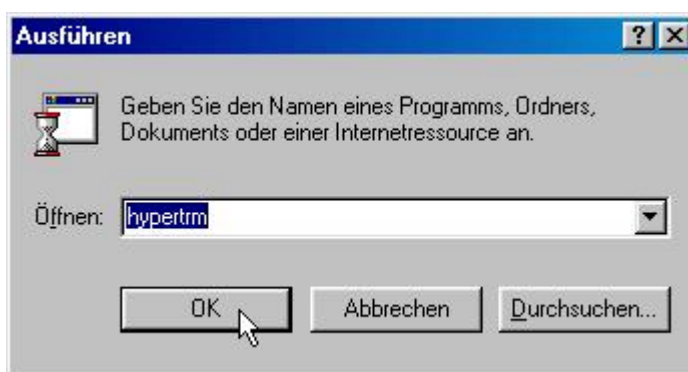
After the interface cable has been replaced, the device has to be reinitialized (see 4.2 and 4.3).

4 Operation

4.1 Configuration of the terminal program

After the configuration of the reader and of the application program, you can read in the barcodes via the serial interface. The configuration of the application program is explained here with the example of the "HyperTerminal" program, which is included in the standard Windows version.

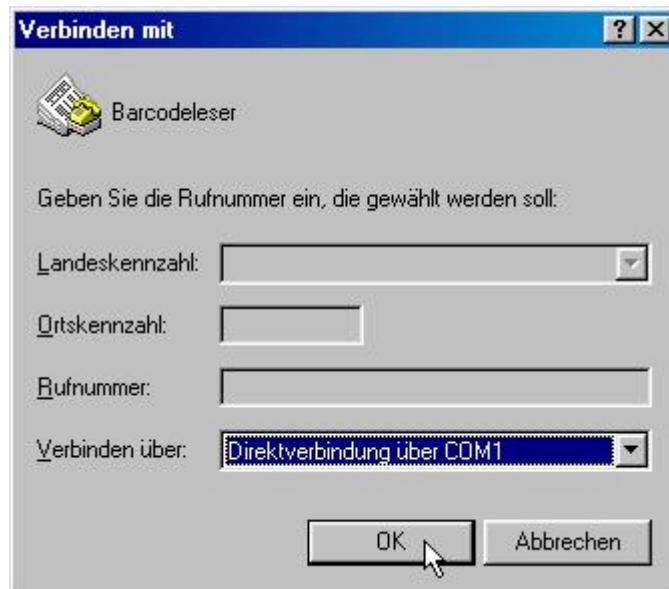
- Click "Start" and then click "Perform".
- In the "Perform" window, type the program name *hypertrm* and click [OK] or press ENTER.



- Enter a name for the new connection in the following window, select an icon and click [OK].



- On the "Connect via" list box in the following window, select the serial interface by means of which you have connected the barcode reader to the PC.



- Then configure the interface according to the following illustration.



Now the program is installed. From now on you can start the program with a double-click on the icon you have selected. It is in the folder `c:\programs\accessories\HyperTerminal`. You can also shift the icon to the desktop and start the program directly from there.

4.2 Configuration (initialization) for devices with RS 232 interface

1. Attach the two following barcode tags to a milk sample bottle.
You can copy sheet 1 in the appendix, cut out the tags and stick them to the bottle.



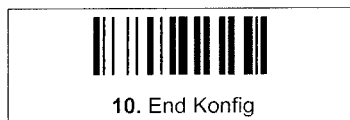
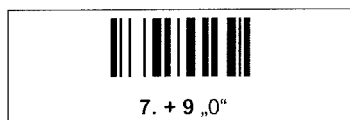
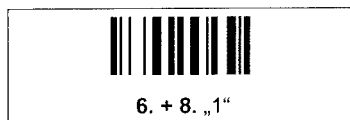
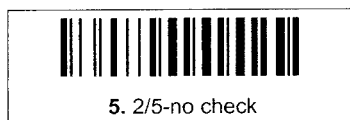
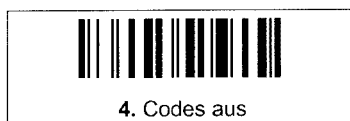
2. Disconnect the device from its power supply for 5-10 seconds by pulling out the power supply plug of the device for a short time and then plugging it in again.
3. Put both of the bottles with the configuration tags successively into the shaft.
The barcode has to be read. The device acknowledges this with acoustic signals.
4. Connect the device to a PC, unless it has already been connected.
5. Call a terminal program at the PC, e.g. Hyperterminal.
Configure the terminal program:
Regulate COM interface that the interface is plugged into (mostly COM1 or COM2).
Configure interface parameters (9600 baud, no parity, 8 data bits, 1 stop bit, no handshaking).
6. Enter the following character string (Reset):
\$+\$* [Enter]
7. Wait for a short time until the device has acknowledged the command with an acoustic signal.
8. Enter the following character string (barcode configuration):
\$+AZOAC111010\$- [Enter]
9. Wait for a short time until the device has acknowledged the command with an acoustic signal.
10. Take the bottle with the configurations tag out of the device.
The configuration is completed now.
11. For testing, put a "normal" milk sample bottle into the device. The barcode should be read and displayed on the screen now.

4.3 Configuration (initialization) for devices with keyboard interface

1. Attach the two following barcode tags to milk sample bottles.
You can copy sheet 2 in the appendix, cut out the tags and stick them to the bottles.
At each case, you need one barcode tag with the numbers from 1 to 10.
Select the appropriate keyboard option.



oder

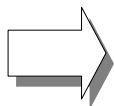


2. Disconnect the device from its power supply for 5-10 seconds by pulling out the power supply plug of the device for a short time and then plugging it in again.
3. Put the bottle with tag no. 1 into the shaft.
The barcode has to be read in now. The device acknowledges this with an acoustic signal.
4. Now read in the remaining codes one after the other (2, 3, 4, 5, 6, 7, 8, 9, 10)

5. Take the last bottle out of the device. The configuration is completed now.
6. For testing, start your application or an editor (e.g. notepad). Put a "normal" milk sample bottle into the device. The barcode should be read and displayed on the screen now.

4.4 Read barcodes

To read the barcodes, put the sample bottle into the shaft. The barcode is read and displayed on the screen or it is transmitted via the interface.



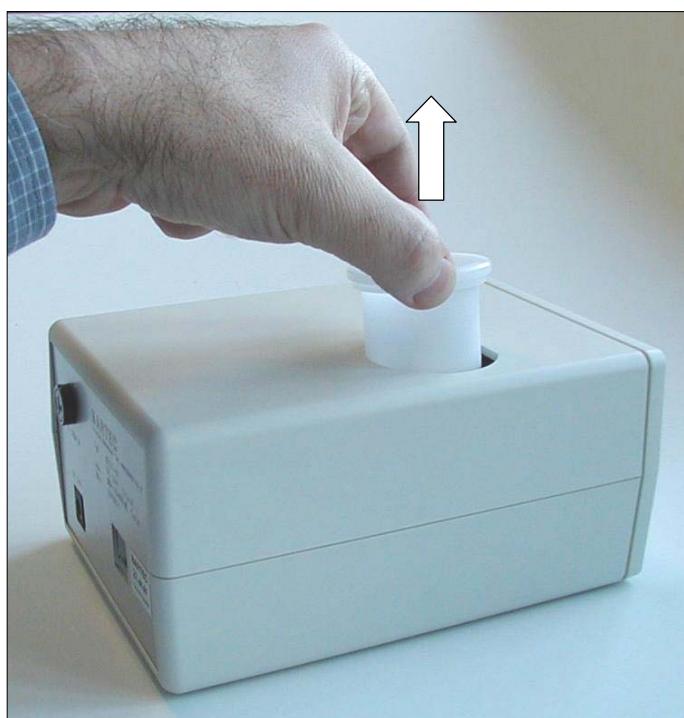
The number of revolutions before a bottle is read doesn't allow any conclusions as to the quality of the barcode tag. Due to the system, the number of revolutions can vary between 1 and 5 revolutions. It depends on the mechanic stabilization of the bottle after it has been inserted into the shaft.

If there is an error (e.g. a readable barcode in proper working condition is not read or is not transmitted to the PC), the device has to be reinitialized depending on the device type (see 4.2 or 4.3).

5 Maintenance

5.1 Clean the container

Take the container out of the opening. Now you can clean both parts of the container with water and dishwashing liquid.



Reinsert the container so that the opening on the upper part of the container faces the window of the barcode reader.

5.2 Clean the window of the barcode reader

Take the container out of the opening of the housing.
Clean the window of the barcode reader with a clean, lint-free cloth.
If necessary, you can use a detergent (window cleaning fluid, spirit).
Put back the container so that the opening on the upper part of the container faces the window of the barcode reader.

5.3 Replace the fuse

If the fuse has to be replaced, unscrew the fuse holder by means of a screw driver. Replace the defective fuse by a new one (0.5 A M.).



6 Appendix

6.1 Configuration tags for devices with RS 232 interface

(copy and cut out)

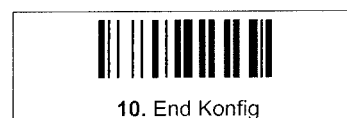
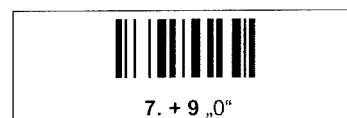
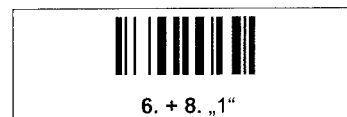
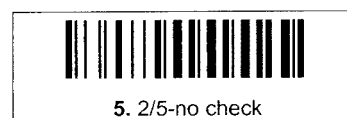
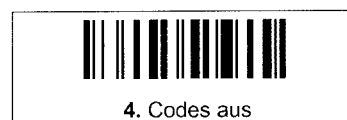
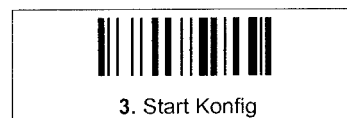


6.2 Configuration tags for devices with keyboard interface

(copy and cut out)



oder



6.3 Configuration for barcode type Code128

The following configuration has to be carried out in addition to the standard configuration if the barcode type Code128 has to be read.

Configuration tags for devices with keyboard interface



Configuration for devices with RS232 interface

Enter the following character string (Code 128 configuration):

\$+A111\$- [Enter]

Wait for a short time until the device has acknowledged the command with an acoustic signal.

The configuration is completed now.

For testing, put a milk sample bottle with Code 128 into the device. Now the barcode should be read and displayed on the screen.
