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SF40A PRINTER
Instruction Manual

SF40A DRUCKER
Bedienungsanleitung

Manuel d'instructions
IMPRIMANTE SF40A

IMPRESORA SF40A
Manual de instrucciones

STAMPANTE SF40A
Manuale di istruzioni

CONTENTS

Overview……1

1 Introduction……2

1.1 Description……2

1.2 Features……2

1.3 Package Contents……2

2 Startup Procedure……3

2.1 Safety Measures……3

2.2 Power Supply……3

2.3 Printer setup……4

2.3.1 Printer setup using the accompanying software……4

2.3.2 Printer setup using printer only……7

2.4 Installing the Printer……8

2.4.1 Connecting the printer to the instrument……8

2.4.2 Switching the printer on……8

2.4.3 Inserting paper……8

3 Keystroke Functions……9

4 Menu……10

4.1 Menu tree structure……10

4.2 Printout example……11

4.3 Applications……12

5 Printer Test……13

6 Maintenance……13

6.1 Changing the Paper Roll……13

6.2 Replacing the Ribbon……13

6.3 Cleaning……14

6.4 Disposal……14

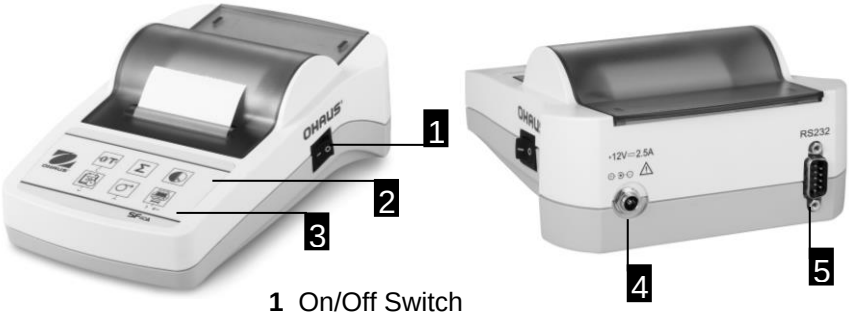
7 Troubleshooting……15

8 Recommended Settings…….....17
9 Consumables and Spare Part…….....18
10 RS232C Interface……..…….....18
11 Technical Data…….....19

Overview

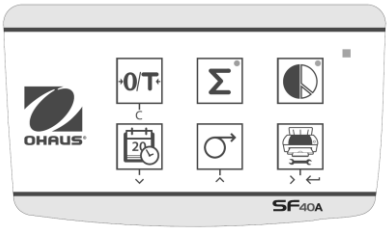
Controls

Connections



1 On/Off Switch
2 Pilot lamp – status indicator
3 Control panel
4 Power connection
5 Interface connector

Control panel



Functions

Key	SF40A
0/T	• Zeroing /Taring the balance • Abort – Exit
20	• Printout of date and time • Scroll down menu option
	• Paper feed • Scroll up menu option
	• Printing of stable weight values • Opening the menu - select next menu option • Save settings
Σ	• Totaling application
	• Statistics application

1 Introduction

1.1 Description

The SF40A is an advanced dot matrix printer from OHAUS instruments. The printer has Statistics and Totalization functions. The SF40A also meets the requirements of modern quality assurance systems such as (GLP, GMP, ISO9001 etc.).

1.2 Features

- Supports all 13 languages present in Ohaus instruments.
- Statistics and Totalization functions.
- Zero / Tare function.
- Real-time clock function.
- The printout meets the requirements of modern quality assurance systems (GLP, GMP, ISO9001, etc.)
- Complies with the requirements of measurement traceability by precisely documenting the origin of data, as well as calibration procedures.
- Meets the requirement of archiving measurement results by providing a thermally stable and light resistant printout.
- Easy setup with the software provided with the printer.

1.3 Package Contents

- Printer
- Power Adapter
- Warranty Card
- RS232 Cable
- Instruction Manual
- Paper Roll
- Cable Adapter
- Paper Rotary Axis
- Power Cable*

Note: * AM/US version : 1 cable, EU/UK version : 2 cables.

2. Startup Procedure

2.1 Safety Measures

The Printer has been tested for the connections and intended purposes documented in these Operating Instructions. However, it is your responsibility to perform the necessary tests related to the methods and purposes of its intended use. Therefore, you should observe the following safety measures.

- The printer must be used indoors only, and never in hazardous areas.
- The electronics of the printer are protected against the ingress of splashing water and dust. However, since the printer housing is not watertight, the printer should not be used in the presence of liquids.
- Comply with cleaning instruction (see chapter 6.3), protect power plug against wet conditions.
- Never open the printer housing. If you have any problems with your printer, please contact your responsible OHAUS service.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

2.2 Power Supply

Your printer is supplied with an AC adapter with a country-specific power cable. The power supply is suitable for all line voltages in the range: 100 – 240 VAC, 50 – 60 Hz (for exact specifications, see chapter 11).

Attention

- First, check the local line voltage is in the range 100 – 240 VAC, 50 - 60 Hz and whether the power plug fits your local power supply connection. **If this is not the case, on no account connect the printer or the AC adapter to the power supply**, but contact the responsible OHAUS dealer.
- **Only plug the adapter into a socket which is grounded.**

Important

- Before operating, check all cables for damage.
- Guide the cables so that they cannot become damaged or interfere with the weighing process.
- Make sure that the AC adapter cannot come into contact with liquids
- The power plug must always be accessible.

2.3 Printer Setup

The default setting of the printer is as below.

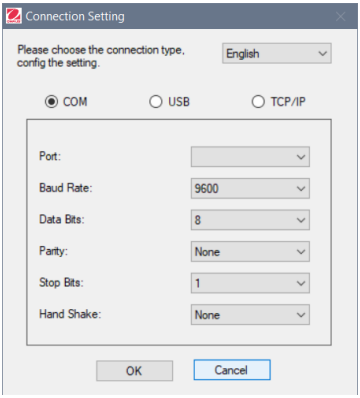
Header:	No Header	Baud rate:	9600
Date Format:	DD.MMM YYYY	Data bits:	8
Time Format:	24:MM:SS	Parity:	None
Char Set:	CP1252 Window Latin1	Stop bits:	1
Balance Feature:	Balance Feature Enable	Flow control:	Xon/Xoff
O/T Settings:	Perform Zero		

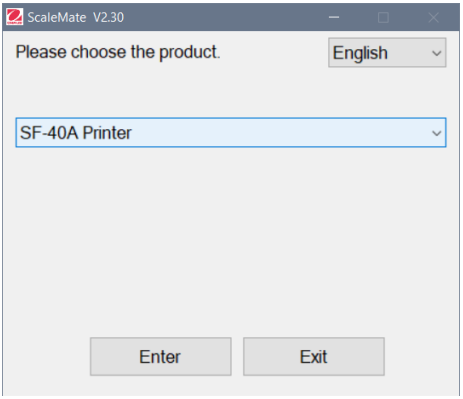
There are two ways to change the default setting:

- Use OHAUS software "ScaleMate".
- Operate on the printer only.

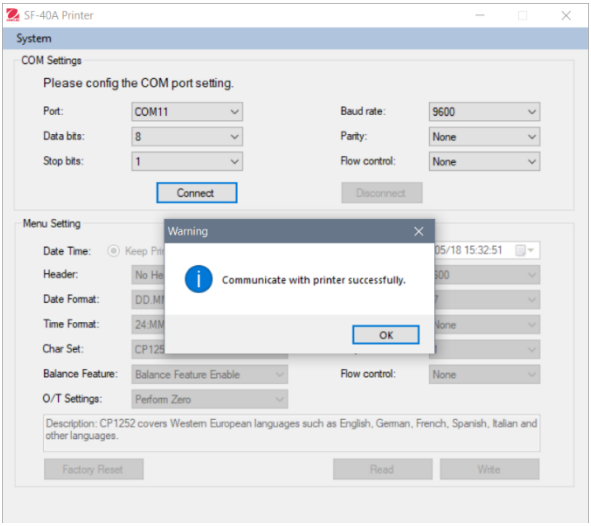
2.3.1 Printer setup using OHAUS software ScaleMate

1) Use the cable (Interface kit RS232-USB, PN 30304101) and accompanying cable adapter to connect the computer and the printer.
2) Connect the printer to the main power supply.
3) Use the main switch <I/O> to power on.
4) Install the OHAUS software ScaleMate (please contact your local OHAUS dealer for the software)
5) Run the software, click “Cancel”, then choose “SF-40A Printer” and click “Enter”.

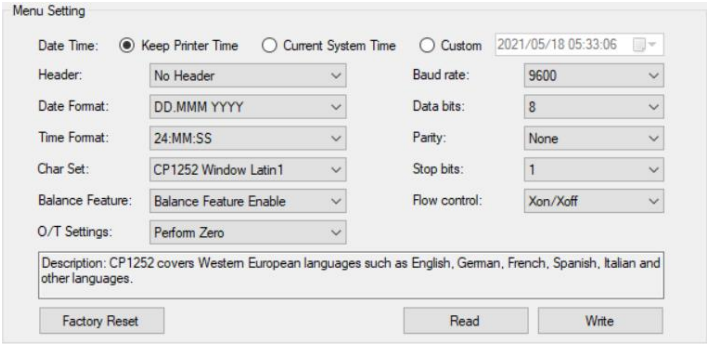




6) Configure the COM port setting of the computer, then click the “Connect” button. The following window will appear if connection is successful, click OK to continue.



7) The printer Menu setting is now activated and all the settings can be changed.



a. **Date Time:** Set the date and time for the printer

- Keep Printer Time: keep the existing date and time in the printer
- Current System Time: Get the date and time from your computer
- Custom: Set the date and time manually

Note: The date and time of the balance has priority when：

- The balance/scale has built-in data/time.

- The Balance Feature in SF40A is enabled.

b. **Header:** Set the header of the printing content

- No header: No header for printing content
- Date/Time: Header with date and time
- Date/Time/Balance: Header with date, time and the serial number of the balance/scale.

c. **Date Format:** Set date format

d. **Time Format:** Set Time Format

e. **Char Set:** Set the Code page for different languages

- CP 1252 Window Latin1: Covers Western European languages such as English, German, French, Spanish and Italian.
- CP 1251Window Cyrillic: Covers languages that use the Cyrillic alphabet such as Russian, Bulgarian and Serbian Cyrillic.
- CP437 MS-DOS Latin US: Covers Western European languages such as English, German, French, Spanish and Italian.
- CP852 MS-DOS Latin2: Covers Central European languages that use Latin script such as Polish Bosnian, Czech, Hungarian, Croatian, Romanian, Serbian and Slovak.
- CP860 MS-DOS Portuguese: Covers Portuguese language

Note: SF40A supports Chinese, Korean and Japanese no matter what Character code is.

f. **Balance Feature :**

1) Enable/Disable a function of the printer: 0/T, Statistics, Totalization

2) Printer connection status: LED light will either blink or stay lit.

- Balance Feature Enabled: 0/T, Statistics and Totalization functions of the printer are enabled. The printer connection status LED light will blink if the connection with balance is lost.
- Balance Feature Disable: 0/T, Statistics, Totalization functions of the printer are disabled. The printer connection status LED will be lit even if the connection with balance is lost.

g. **0/T Setting:** Set up the function of the button 0/T

- Perform Zero: Perform Zero function when pressing the button.
- Perform Tare: Perform Tare function when pressing the button.

h. **Baud rate, Data bits, Parity, Stop bits, Flow control:** Set the parameters of RS232 setting.

The settings should be the same as the instrument to be connected. For the instrument RS232 settings, please see the instrument manual.

Factory Reset — Reset the printer to factory default setting.

- Baud rate: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: Xon/Xoff

Read — Get the current setting from the printer.

Write — Save the setting to the printer.

8) Click "Write" button to save the setting to the printer.

2.3.2 Printer setup using printer only

1) Connect the printer to the main power supply.

2) Use the main switch <I/O> to power on.

3) Press and hold the « » button to enter the menu list, the printer will print

"----------Menu-------".

Press « » to choose which item to change.

Press « » to change the parameter.

Press and hold « » to save and exit.

Press « » to exit without saving

The printer will print the content to show the result of every operation.

For total menu structure, please see chapter 4.

To check the version number of SF40A, use the main switch <I/O> to power on while pressing and holding the « » button. When the printer starts printing, release the « » button.

2.4 Installing the printer

2.4.1 Connecting the printer to the instrument

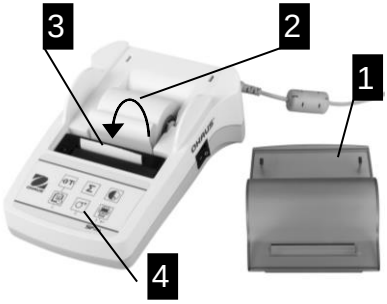
Before connecting, make sure the instrument and printer have the same RS232 parameter setting. For instrument Baud rate settings, please see the related manual.

- Attach the interconnecting cable to the printer interface of the instrument and to the printer.
- Switch the instrument on.

2.4.2 Switching the printer on

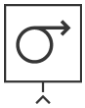
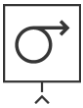
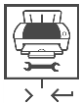
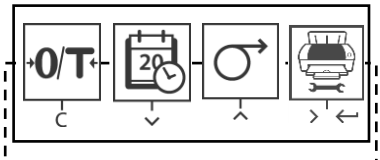
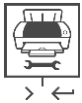
- Connect the printer to the mains power.
- Use the main switch <I/O> to power on.
- RS232 interface only: The pilot lamp will flash until an instrument is connected. If the lamp continues to flash see chapter 7.

2.4.3 Inserting Paper



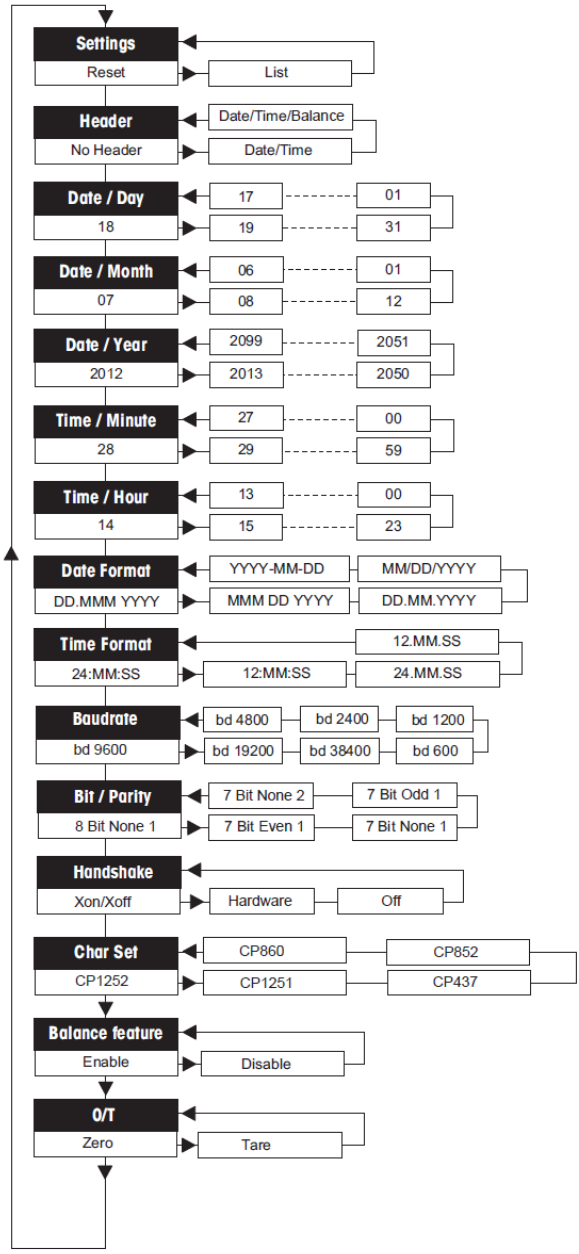
- Remove paper cover (pull on the back) (1).
- Insert the paper rotary axis through the core of the paper roll (2).
- Feed paper through the slot in the printing unit in the direction of the arrow (3).
- Press and hold until enough paper has been fed (4).
- Replace the paper cover (1).

3 Keystroke Functions

	Press briefly	Press and hold
Operational Level	Zero or Tare the balance print Date and Time  one line feed print	 continuous feed (until release)  open menu
Menu Level	 exit down up next	 store
Function Level	Start totaling application Start statistics application	Conclude totaling application Conclude statistics application

4 Menu

4.1 Menu tree structure



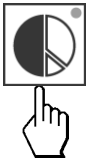
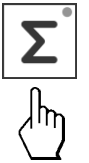
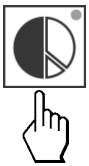
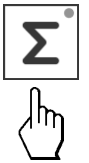
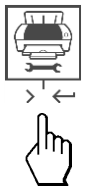
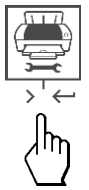
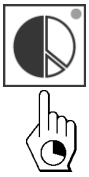
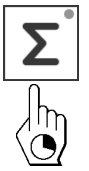
4.2 Printout example

```
---------MENU--------
Settings:
  * List

Header:
  * No Header

Date Day:
    31

Date Month:
    07

Date Year:
    2012

Time Minute:
    00

Time Hour:
    18

Date Format:
   * YYYY-MM-DD

Time Format:
   * 24:MM:SS

Baudrate:
   * 9600

Bit/Parity:
   * 8 Bit None 1

Handshake:
   * Xon/Xoff

Char Set:
   * CP1252 Windows Latin 1

Balance Feature:
   * Enable

->0/T<- Setting:
   * Zero
```

* Factory settings

4.3 Applications

Press briefly Press and hold

Statistics Application		Totaling Application	
	→ Start “Statistics application” (LED on)		→ Start “Totaling application” (LED on)
	→ Add a new sample and press « ».		→ Add a new sample and press « ».
	→ If needed print subtotal press « »		→ If needed print subtotal press « »
	→ Print and end “Statistic application” (LED off).		→ Print and end “Totaling application” (LED off).

Important notes

Unit change during the application is not permitted.

1) Maximum 999 samples can be stored in each of above applications (statistics and totaling).
2) Minimum sample weight should be larger than 1d.
3) During application, the change of sample weight on the weighing pan should be more than 100d, otherwise the printer will not register the sample change.
4) The report for statistics applications includes: number of samples, average value, standard deviation, min, max, min-max differential and total weight.

5 Printer Test

The printer is equipped with a self-test that automatically prints out the character set of the printer (standard IBM/DOS).

Starting the test → Press the « » key and power on the printer. The printer prints out the current settings.

Terminating the test → Power off the printer.

6 Maintenance

Under normal conditions the printer requires practically no maintenance. The OHAUS service department is available if servicing is required. Please ask your responsible OHAUS dealer for details.

6.1 Changing the Paper Roll

Insertion of a new roll of paper is described in chapter 2.4. Please see chapter 9 (Consumables) for paper roll order number.
Note: You may obtain the paper rotary axis from the old paper roll.

6.2 Replacing the Ribbon

- Remove the paper cover (1)
- Pull paper out of printing unit (2)

- To remove the ribbon cartridge, press in direction of arrow (3).
- Insert the new ribbon, and if necessary, take up slack with tensioning wheel (4). See chapter 9 (Consumables) for the ribbon cartridge order number.
- Insertion of a new roll of paper is described in chapter 2.4.

6.3 Cleaning

Since the printer housing is made of top grade materials, all commercially available mild cleaning agents may be used (see safety precautions in chapter 2.1).

6.4 Disposal

Disposal

In conformance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste.
This also applies to countries outside the EU, per their specific requirements.
Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment. If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Disposal instructions in Europe are available online at europe.ohaus.com/europe/en/home/support/weee.aspx.

Thank you for your contribution to environmental protection.

7 Troubleshooting

Problem / Message	Possible cause	Correction
Printout unreadable	• Ribbon worn or entangled. • Service life of printing unit at an end.	• Change ribbon cartridge or tense the ribbon properly. • Please contact OHAUS service.
Pilot lamp does not light	• No power. • Power supply fault.	• Switch printer on. • Please contact OHAUS service.
Pilot lamp flashes	• No connection printer device. • Printer did not find the settings of the connected instrument.	• Make sure that the printer and the instrument is connected. • Switch the printer off/on. • Alternatively change the settings of the printer or the connected instrument. (see chapter 2.4)
----------Timeout----------	• Data transfer has not completed in the last 45 s.	• Move balance to more stable location. • Check the balance.
----------Over Load----------	• Balance in overload range.	• Check the sample weight.
	• Zeroing out of the zero range.	• Change the zero range of the balance. • Change the setting of the printer from zero to tare.
----------Under Load----------	• Balance in underload range. Weighing pan is not in position.	• Check the balance.
--Transmission Error--	• Instrument does not understand printer instruction.	• Check interface parameter settings on printer and instrument.

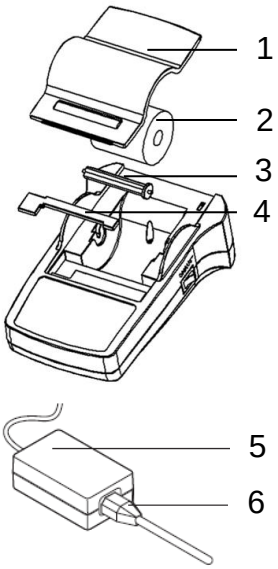
Problem / Message	Possible cause	Correction
--------Not Executable------	• Instrument cannot execute printer instruction.	• Check the balance.
----Date/Time Not Set--- ---------Memory Error---------	• Printer error messages.	• Check the instrument. • Reset the printer. • Set date/time • Back-up battery depleted Please contact OHAUS service.
--------- Memory full----------	• Statistics or Totaling Memory is full. (more than 999 samples)	• Start a new Statistics or Totaling application.
--Load/Unload Weight---	• No sample or the same sample is on the weighing pan.	• Put a new sample or remove it and put it again on the pan.
Unit change not allowed!	• Changed unit during Statistics or Totaling application.	• Reset the balance. • Change the unit back to the first one.
---------Out of range---------	• Sample weight is out of range	• Sample weight must be in the range of 70% - 130% of the current average value.

8 Recommended Settings

Connected Device	Device Settings	Printer Settings
DV, AV, PA, AR, AX, PX SP, TA, NV, NVL, NVT, MB35/45, MB23/25, MB90/120 (T31P, T51P, T71P, T32XW, T32WE, T51 XW, T71XW, CKW)*	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff	Factory Settings
EX	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff	Factory Settings
Russian	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff Language: ANSI/WIN Russian	CP1251 Windows Cyrillic
Polish	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff Language: ANSI/WIN Polish	CP852 MS-DOS Latin2
Czech	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff Language: ANSI/WIN Czech	CP852 MS-DOS Latin2
Hungarian	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff Language: ANSI/WIN Hungarian	CP852 MS-DOS Latin2
Portuguese	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff Language: ANSI/WIN Portuguese	CP860 MS-DOS Portuguese
English, French, German, Italy, Spanish, Chinese, Japanese, Korean	Printer Mode Baud rate: 9600 Bit / Parity: 8 bit None 1 Handshake: Xon/Xoff	Factory Settings

Note: * The Statistic and Totalization functions of the printer are supported in the following models: DV, EX, AV, PA, NV, MB23/25, AX and PX.
Only printing function is supported in all other models.

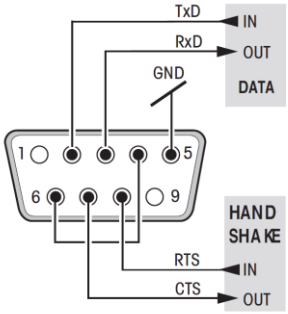
9 Consumables & Spare Parts



Pos.	Item	Part Number	Delivery Quantity
1	Paper Cover	30047939	1 pcs
2	Paper roll	12120799	1 pcs
3	Paper Rotary axis	30063920	1 pcs
4	Ribbon cartridge, black	30529322	1 pcs
5	AC/DC adapter (without power cable) 100 - 240 VAC, 50 - 60 Hz, 12 VDC 2.5 A	30529321	1 pcs
6	Power cable CH Power cable EU Power cable US Power cable IT Power cable GB Power cable AU Power cable BR Power cable JP	30064089 12120761 12120762 30064200 12120312 12120313 83033772 12122638	1 pcs 1 pcs 1 pcs 1 pcs 1 pcs 1 pcs 1 pcs 1 pcs
-	RS9 M/F Cable, 1.5 m	30529323	1 pcs

10 RS232C Interface

The SF40A printer is equipped with an RS232C interface to connect OHAUS instruments.



- 9-pin male connector
- Matching to other devices (transmission parameters) see chapter 8.

11 Technical Data

Power supply	AC/DC adapter: 12 VDC, 2.5 A Primary: 100 – 240 VAC, -50 -60 Hz Voltage fluctuations: up to ±10% of the nominal voltage Secondary: 12 VDC, 2.5 A (with electronic overload protection)
Cable to AC/DC adapter	3-core, with country-specific plug
Power line voltage	12 VDC
Power consumption	Max. 2.5 A
Altitude	up to 2000 m
Ambient temperature	0 ºC – 40 ºC
Relative humidity	Max. 80% at 31 ºC, decreasing linearly to 50% at 40 ºC, noncondensing
Overvoltage category	Class II
Pollution degree	2
Printing unit	Dot matrix printer 5x7, 40-character line length
Printing speed	1.2 lines per second
Ribbon cartridge	Exchangeable, black
Paper roll	Standard paper 57.5 mm x ø 50 to 60 mm, integrated in housing, commercial size
Print quality	Light resistant and thermally stable printing (GLP, GMP, ISO9001)
Interface	RS232C
Printer dimensions	(WxDxH) 120 mm x 203 mm x 73 mm
Packaging dimensions	(WxDxH) 255 mm x 205 mm x 150 mm
Net weight	740 g (paper roll incl.)
Compatibility limits	• Function Date / Time: not applicable on balances with built-in clock (built-in clock has priority) • Functions Zeroing / Taring, Statistics and Totalization: not applicable on all models of balances