REV. 1.0
23th Jan. 2008

Portable thermal printer

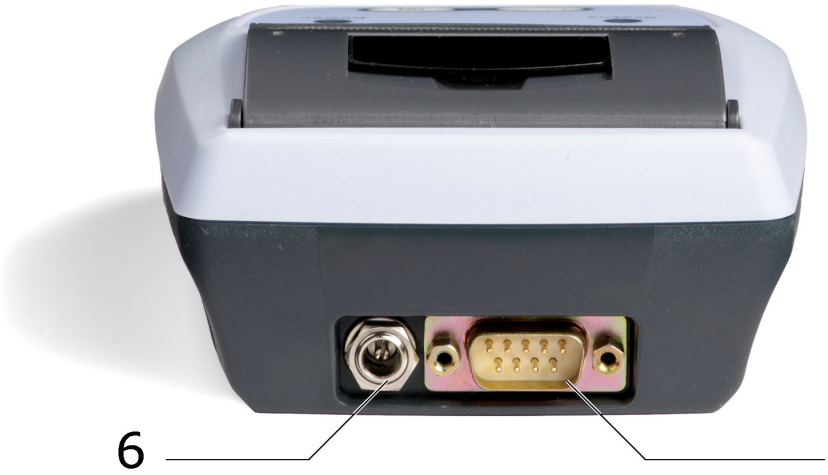
HD40.1

HD40.2

ENGLISH

Our instruments' quality level is the result of the product continuous development. This may lead to differences between information written in this manual and the instrument that you have purchased. We cannot entirely exclude errors in the manual, for which we apologize.
Data, figures and descriptions contained in this manual cannot be legally asserted. We reserve the right to make changes and corrections without prior notice.

Portable thermal printer
HD40.1 and HD40.2



HD40.1 – HD40.2

1. **STATUS** Led: shows the printer status.
2. **MENU** key: advances paper by two lines. When you turn on the printer, if you press the Menu key and the ON/OFF key, you activate the printer configuration mode.
3. Cover that gives you access to the paper roll and the printing mechanism.
4. **POWER** Led: provides information on rechargeable battery status.
5. **ON/OFF** Key: switches on and off the printer. If you press it with the MENU key, it gives you access to the configuration mode.
6. Power supply connector. The positive pole is in the middle .
7. 9-pole D-Sub male connector for RS232 serial connection.

1. INTRODUCTION

The ***HD40.1*** and ***HD40.2*** are lightweight, compact, portable thermal printers. The HD40.1 is connected to instruments or PC through the RS232 serial input. The HD40.2 features a dual mode data reception system - RS232 serial and Bluetooth.

The Bluetooth wireless connection makes the HD40.2 printer very useful "in the field", since it does not require any connection to the instrument.

A careful design allows you to replace the thermal paper roll in a few seconds.

A four NiMH **rechargeable** battery pack provides power supply and ensures long autonomy: you can print up to 3000 lines at full charge.

Standard thermal paper roll width: 57mm.
Print resolution :203 dpi
Print characters (each line): 24
Protection degree: IP40.

2. KEYBOARD AND LED DESCRIPTION

ON/OFF Key

Press the ON/OFF key until the Status led starts blinking to turn on the printer, then release the key.
Press the ON/OFF key until the Status led remains on to turn off the printer, then release the key.
To access the configuration mode, press the ON/OFF key and the MENU key to turn on the printer: when the paper roll starts advancing, release both keys (see chapter 3.4, Setup description).

MENU key

When the printer is on, press the MENU key to advance paper by two lines.
When you turn on the printer, press the MENU key with the ON/OFF key to activate the printer configuration mode.

POWER Led

The POWER Led provides information on the rechargeable battery status.
When you connect an external power supply, the printer checks rechargeable battery status and, if necessary, it starts charging batteries.
A precharge phase may precede the real charge in order to avoid excessive stress on batteries when they are significantly discharged or their temperature is too low: in this phase the POWER led blinks every second.
After this first phase, the quick charge starts: the POWER led remains on and it turns off when the battery is fully charged.
At this point you can disconnect the external power supply and use rechargeable batteries only.

Warning: if you connect an external power supply and the POWER led turns off immediately instead of lighting, it means that there is a fault or there are no batteries.

STATUS Led

The STATUS led shows the printer status. If the led blinks every two seconds, it means that the printer is on and ready to print. If you disable the automatic switch - off, the led blinks twice every two seconds (to set automatic switch-off, see paragraph 3.4.1 point 3).

To turn off the printer, press the ON/OFF key until the STATUS led stops blinking and remains on: now you can release the key. The printer turns off.

The following table shows different POWER and STATUS led combinations.

STATUS LED	**Description**
Always off.	Printer is off.
Blinks slowly (every two seconds).	Printer is on and ready to print.
Remains on.	Printer is turning off. When the printer is on, you are pressing the ON/OFF key to turn it off.
Blinks twice every two seconds.	Printer is on and ready to print. You have disabled the automatic switch-off.

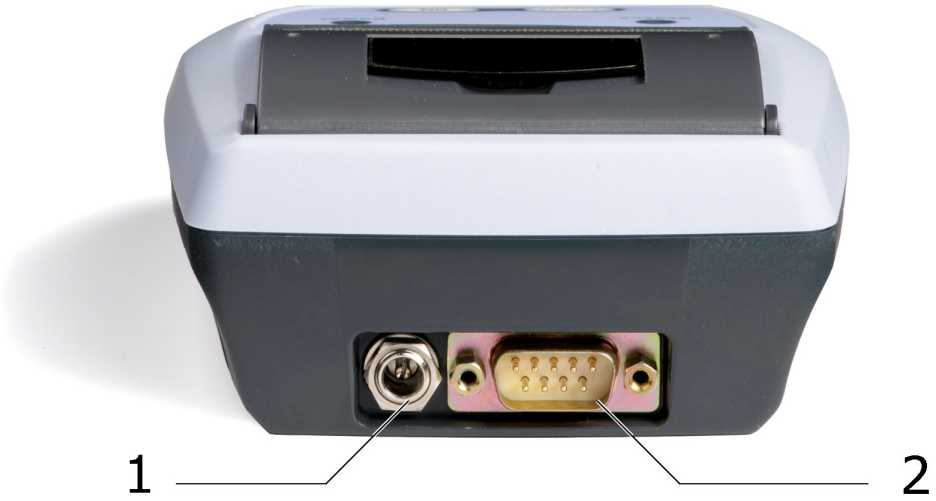
POWER LED (*)	**Description**
Blinks quickly (every second).	Precharge followed by quick charge.
Remains on.	Quick charge.
Always off.	Batteries charged, printer ready to print.
Blinks quickly and then it turns off.	Error: no batteries, no connection, faulty batteries.

(*) External power supply connected.

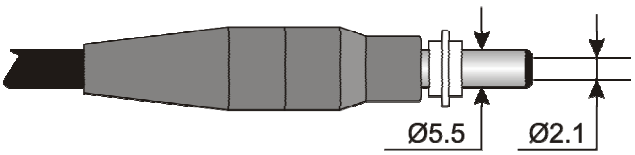
3. HOW TO INSTALL AND USE YOUR PRINTER

3.1. ConnECTIONS

The printer has one input (1) for the battery charger power supply and one plug (2) for RS232 serial connection.



Power supply connector
The power supply connector is 5.5mm in outer diameter and 2.1mm in inner diameter.



The positive pole is in the middle

The printer is provided with the **SWD10** power supply which features:
- Output voltage: 12Vdc
- Maximum current: 1A.

The printer is supplied with a four 1.2V rechargeable battery pack located in the battery compartment : **the printer does not work without batteries**.
See chapter 3.3 to charge batteries.

RS232 serial connector
The printer is equipped with an RS232 serial communication interface with 9-pole D-sub male connector (2). **The HD40.2 model also allows a Bluetooth wireless connection**.

A **null modem** cable is necessary to connect the printer to the instrument : use the **HD2110CSNM** cable for instruments with 8-pole Mini DIN connector (ex. HD21xx and HD34xx.2 series, HD2010, HD2110, etc.).
Use the **9CPRS232** cable for instruments with 9-pole connector (ex. HD22xx.2 series, HD25.2, etc.).

3.2. HOW TO LOAD PAPER

The printer uses thermal paper rolls which are 57mm wide and max. 32mm in diameter. Loading thermal paper roll is easy and quick.

Follow the steps below to replace the paper roll:
1) Pull the lid to open the cover.

2) Insert the paper roll according to the sense of rotation as shown below.

3) Pull the paper and close the cover centring the paper roll.

4) Tear off excess paper. The printer is ready.

3.3. BATTERIES

3.3.1. How to charge batteries

Use the **SWD10** battery charger supplied with the printer to charge batteries.
Follow the steps below:

- Connect the battery charger plug to the mains and the battery charger connector to the socket in the rear of the printer.
- If batteries are extremely discharged or temperature is too low, the POWER led blinks for a few seconds (precharge) and then it remains on to indicate printer quick charge.
- Charge the batteries until the POWER led turns off.
- Now the printer is ready: disconnect the battery charger cable.

Note: The first time you use the printer, you need to fully charge batteries.

3.3.2. Notes on battery usage

- A new NiMH battery performs best only after fully discharging and charging it at least twice or three times.
- Battery autonomy changes significantly depending on printing intensity and quantity. Even a charged battery will eventually discharge if unused.
- The battery may be charged and discharged hundreds of times but the battery will eventually become exhausted. When autonomy (both when printing and waiting) is far lower than usual, battery pack needs replacing.
- Use only the **BAT-40** Delta Ohm battery pack and charge it by using the **SWD10** battery charger, or alternatively, one complying with our technical specifications.
- NiMH batteries last longer provided that you discharge them completely from time to time.
- Extreme temperatures may negatively affect battery performance.

3.3.3. How to replace battery pack

Follow the steps below to replace the battery pack:

- Disconnect the external power supply and turn off the printer.
- Unscrew (2) the battery compartment cover located at the bottom of the printer (1).

- Remove the connector. Make sure you don't tear wires.
- Remove the battery pack.
- Plug the connector to your new battery pack: a notch on the connector will help you insert it correctly.
- Position the pack in the battery compartment.
- Screw the battery compartment.

3.3.4. Battery disposal

Recycle or dispose of batteries properly.
Do not throw batteries in the dustbin.
Do not throw batteries into fire.

3.4. HOW TO CONFIGURE YOUR PRINTER

The printer operating parameters are as follows (factory values have been underlined):

1. **Interface selection**: only RS232 for the HD40.1, RS232 or Bluetooth for the HD40.2.
2. **RS232 serial communication baud rate**: 9600, 19200 or 38400.
3. **Automatic switch-off delay**: 0, 5, 10 or 15 minutes.
4. **Printing density**: -2, -1, 0, +1, +2.

Please follow the steps below to change these parameters:

- When the printer is off, press the MENU key and the ON/OFF key until the printer turns on and the paper roll advances. The first parameter you want to change will appear.
- Press the MENU key to change a parameter: the new value is printed.
- Press the ON/OFF key to confirm a parameter that you selected and go to the next one.
- Finally, after confirming the last parameter, the printer exits the configuration menu.

Chapter 6 includes a step-by-step guide to configuring your printer correctly.

3.4.1. Printing parameters in detail

1) Interface selection (for the HD40.2 model only).

Two communication interfaces are available for the HD40.2 model: Bluetooth and RS232 serial. The factory configuration is RS232.
Bluetooth technology allows wireless printing from a Delta Ohm instrument equipped with the HD22BT Bluetooth module. Other brand instruments with Bluetooth interface also allows printing, provided the number of printing columns is 24.
A remote Bluetooth device identifies the printer as "DELTAOHM PRINTER".
Should the Bluetooth device require a password to connect to the printer, enter "DELTAOHM".
The Bluetooth baud rate is fixed at 38400 baud.

RS232 communication parameters are:

- baud rate: see below
- data bits: 8 bits (unchangeable)
- parity: none (unchangeable)
- stop bits: 1 (unchangeable)
- flow control: Xon/Xoff (unchangeable).

2) Baud Rate

The baud rate is the RS232 serial port communication rate, expressed as bit/second.
The following values are available: 9600, 19200 and 38400 baud.
This parameter doesn't affect the Bluetooth connection which has a fixed baud rate at 38400 baud.

3) Automatic switch-off delay

When this interval of time has elapsed, the printer turns off automatically if you have neither entered any command nor pressed any key.

You can set the following intervals: 0 or 5, 10 or 15 minutes. **If you choose 0, the automatic switch off is disabled and the printer turns off only if you press the ON/OFF key.**

4) Printing density

This parameter allows changing the intensity of print character. "0" is the standard value, -2 and -1 reduce intensity, +1 and +2 increase it.

4. INTERFACES

4.1. RS232 SERIAL INTERFACE

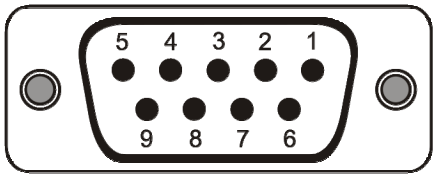
The printer has an RS232 serial interface with a 9-pole RS232 connector located in the rear of the printer. Two different connection cables are available on request according to the device you want to connect - instrument or PC -:

- Cod. **9CPRS232**: is a 9 pole – 9 pole cable for any instrument with standard serial connector and for PC connection. It is also suitable for other brand instruments.
- Cod. **HD2110CSNM**: is a 9 pole – 8 pole MiniDIN cable for Delta Ohm instruments equipped with this connector (ex. HD21xx, HD2010, HD2110, HD34xx.2).

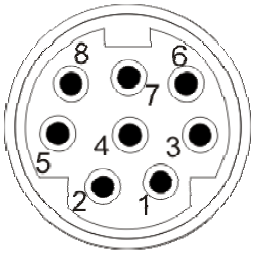
Printer Connector	**Device Connector**	**Cable Code**
DB9 male	Instrument with DB9 male	9CPRS232
DB9 male	Instrument with MiniDIN	HD2110CSNM
DB9 male	Computer with DB9 male	9CPRS232

Both cables are **null-modem**.

Front view of DB9 male connector pin assignment:



Front view of MiniDIN male circular connector pin assignment:



The following tables show cable connections.

9CPRS232 Cable	
DB9 to instrument or PC	**DB9 to printer**
1	4
2	3
3	2
4	1
5	5
6	Disconnected
7	8
8	7
9	9

HD2110CSNM Cable	
MiniDIN to instrument	**DB9 to printer**
1	9
2	1, 6
3	4
4	8
5	2
6	3
7	5
8	7

4.2. BLUETOOTH INTERFACE

The HD40.2 model has a Bluetooth interface.
The printer communicates with Delta Ohm instruments fitted with the **HD22BT** Bluetooth module. Besides, it receives print commands from a PC with Bluetooth interface or the **HD USBKL1** module.
It has a maximum operating radius of 10 m without hindrance.

Select the "Bluetooth" parameter in the printer menu to use the Blutooth communication protocol.

The interface operates according to the "**Serial Port Profile**" protocol which emulates the RS232 serial port. This means that the software connected to the printer operates in the same way either you use a serial cable or a Bluetooth interface.

4.2.1. Control characters

Listed below are the commands to manage printer functions. These commands can be transmitted to the printer via serial interface (RS232 and Bluetooth).

ASCII Command	HEX Command	Decimal Command	Description
ESC + 'A'	0x1B + 0x41	27 + 65	Selects double height character
ESC + 'B'	0x1B + 0x42	27 + 66	selects double width character
ESC + 'C'	0x1B + 0x43	27 + 67	selects double height + double width character
ESC + 'D'	0x1B + 0x44	27 + 68	**selects standard height + standard width character (default)**

5. PRINTER STORAGE

Instrument storage conditions:

- Temperature: -25...+70°C.
- Humidity: 10...90%RH without condensation.
- Make sure you avoid:
  - High humidity.
  - Exposure to direct solar radiation.
  - Exposure to a high temperature source.
  - Strong vibrations.
  - Steam, salt and/or corrosive gas.

The instrument enclosure is made of ABS plastic: use only compatible solvents for cleaning.

6. HOW TO USE YOUR PRINTER

Please find below a step-by-step guide to using, initially setting and connecting your printer to an instrument, as well as printing via RS232 or Bluetooth.
The guide refers to the two most popular connection methods: you can set other methods by following the instructions in the chapters of this guide.

6.1. CONNECTION VIA RS232 CABLE

For the HD40.1 and HD40.2 printers.
Follow A, B, C, D steps in this order.

A) Before starting

1) The printer leaves the factory with partially charged batteries: batteries must be fully charged before use. Plug the battery charger to the connector located in the rear of the printer: the POWER led lights to indicate that batteries are on charge.
2) Wait for the POWER led to turn off: this may take a few hours.
3) Unplug the battery charger.
4) Insert the thermal paper roll as shown in chap. 3.2.

B) How to configure your printer for connection to an instrument via serial cable

The printer leaves the factory with the following settings:

- Interface: RS232
- Baud Rate: 38400 baud
- Automatic Switch-off delay: 5 minutes
- Printing density: 0.

Please follow the steps below to change these parameters:

- When the printer is off, press the MENU key and the ON/OFF key until the printer turns on and the paper roll advances. The communication interface parameter (*RS232* or *Bluetooth)* will appear.
- Press the MENU key to select the *RS232* parameter. For the HD40.1 model, you needn't select this parameter as it is factory set. Press the ON/OFF key to confirm.
- The paper roll advances and the *Baud Rate* parameter will be displayed.
- Press the MENU key to select the required value (the 38400baud factory parameter is usually suitable). Press the ON/OFF key to confirm.
- The roll paper advances and the *Automatic switch-off delay* parameter will be displayed.
- Press the MENU key to select the required value (the factory parameter is 5 minutes, **0 disables automatic switch-off**). Press the ON/OFF key to confirm.
- The roll paper advances and the *Printing density* parameter will be displayed.
- Press the MENU key to select the required value (the factory parameter is 0). Press the ON/OFF key to confirm.
- The printer exits the configuration menu and it is ready to print.

The printer configuration is stored until you change it.

C) How to configure the instrument
In the instrument you must set:
- baud rate at 38400
- Printing interval.
- Interface on PRINTER (For a few instruments only , ex. sound level meters).

Important note: the printer baud rate and that of the instrument must be the same, otherwise the printer **doesn't work.**

For further details, please look at the instrument manual.

D) How to connect the instrument to the printer
Connect the printer to the instrument through the serial cable.
- For instruments with 8-pole MiniDIN connector, use the *HD2110CSNM* cable: 9-pole D Sub female – 8-pole MiniDIN (other side).
- For instruments with 9-pole D Sub male connector, use the *9CPRS232* cable: 9-pole D Sub female (both sides).

Now the printer and the instrument are ready and configured correctly.

6.2. BLUETOOTH CONNECTION

For the HD40.2 printer.
Follow A, B, C and D steps in this order.

A) Before starting
5) The printer leaves the factory with partially charged batteries: batteries must be fully charged before use. Plug the battery charger to the connector located in the rear of the printer: the POWER led lights to indicate that batteries are on charge.
6) Wait for the POWER led to turn off: this may take a few hours.
7) Unplug the battery charger.
8) Insert the thermal paper roll as shown in chap. 3.2.

B) How to configure your printer for connection to an instrument with Bluetooth interface

The printer leaves the factory with the following settings:
- Interface: RS232
- Baud Rate: 38400 baud
- Automatic switch-off delay: 5 minutes
- Printing density: 0.

Please follow the steps below to change these parameters:
- When the printer is off, press the MENU key and the ON/OFF key until the printer turns on and the paper roll advances. The communication interface parameter (*RS232* or *Bluetooth)* will appear.
- Press the MENU key to select the *Bluetooth* parameter. Press the ON/OFF key to confirm.

- The paper roll advances and the *Baud Rate* parameter will appear.
- **This parameter does not affect the Bluetooth interface. Press the ON/OFF key to confirm the value printed.**
- The roll paper advances and the *Automatic switch-off delay* parameter will appear.
- Press the MENU key to select the required value (the factory parameter is 5 minutes, **0 disables automatic switch-off**). Press the ON/OFF key to confirm.
- The roll paper advances and the *Printing density* parameter will appear.
- Press the MENU key to select the desired value (the factory parameter is 0). Press the ON/OFF key to confirm.
- The printer exits the configuration menu and it is ready to print.

The printer configuration is stored until you change it.

C) How to configure the instrument

- Turn on the printer configured as shown above.
- Turn on the instrument and select *System Parameters >> Bluetooth Parameters* in menu.
- Select *Bluetooth Connection to the printer*: the instrument searches for all active Bluetooth devices and it displays the first four devices.
- Use the *UP* and *DOWN* arrow keys to select the printer you want to connect to and press *ENTER* to confirm. The instrument configures itself for connection and it goes back to the measurement mode.

Now you have completed the configuration and the instrument is ready to use.
Settings are stored: when you turn on the instrument, it connects itself to your printer directly.

Set the printing interval on the instrument too.

D) How to connect the instrument to the printer
You can use the HD40.2 printer (configured correctly, as shown in paragraphs B and C) as a normal printer connected to the instrument through a cable. Instrument and printer settings are stored until you change them.
Please follow the steps below:

- Turn on the HD40.2 printer with Bluetooth configuration.
- Turn on the instrument with HD22BT Bluetooth module configured.
- The instrument searches for the printer and it connects itself.

Now the printer and the instrument are ready and configured correctly.

7. FUNCTIONING AND OPERATING SAFETY

Authorized use

Please read carefully the specifications listed in the following chapter. You are allowed to use the instrument only in compliance with these instructions. Any other use is not authorized.

General safety instructions

This instrument is manufactured and tested in compliance with EN 61010-1 safety standards on electronic measuring instruments and it leaves the factory in perfect safety conditions.
Normal functioning and operating safety are guaranteed only if all usual and specific safety standards described in this manual are observed.
Normal functioning and operating safety are guaranteed only if climatic conditions are the same as described in the following chapter.

Use and store the instrument avoiding:

- Sudden change of the ambient temperature that may cause condensation.
- Inflammable or corrosive gases.
- Direct vibration or blows.
- Intense electromagnetic fields, static electricity.

If you carry the instrument from a cold to a hot environment, condensation may affect its functioning. In this case you should wait for the instrument temperature to reach the ambient temperature before using it again.

User obligations

The user must comply with the following standards and directives on the use of dangerous materials:

- EEC directives on safety in the workplace
- National legislation on safety in the workplace
- Safe working practices

8. SPECIFICATIONS

Printing method	Thermal
Resolution	203 DPI (8 dot/mm)
Printing width	48mm centered in the paper roll
Paper roll width	57mm ... 58mm
Max. paper roll diameter	32mm
Number of columns	24
Printing speed	Up to 90 mm/sec (depending on battery charge and ambient conditions)
Sensors	Paper detection
Character set	IBM II 858 table
Printing formats	Normal or extended
Character font	1 (16 x 24 dot – 2mm x 3mm)
Thermal head durability	
Mechanism life	100 million pulses (temperature: 20...25°C)
Abrasion resistance	50km of paper (temperature: 20...25°C)
Cover group durability	2000 opening/closing cycles or more
Communication interfaces	RS232
	Bluetooth 2.0 (for HD40.2)
RS232 Baud rate	9600, 19200 and 38400 baud (the factory parameter is 38400 baud)
Bluetooth Baud rate	38400 baud (for HD40.2)
Bluetooth operating distance	Up to 10m without hindrance (for HD40.2)
Mains power supply (cod. SWD10)	100-240Vac/12Vdc-1A mains battery charger
Batteries	Four 1.2V AA rechargeable batteries (NiMH)
Printing autonomy	3000 lines 24 characters each
	It prints one line every 10 seconds
Switch-off function	0, 5, 10 or 15 minutes
Dimensions	105mm x 165mm x 53mm
Weight	380g (with batteries and paper roll)
Material	ABS

Operating conditions

Operating temperature	0°C ... 50°C
Operating relative humidity	20%RH ... 85%RH not condensing
Storage Temperature / Relative humidity	-25°C ... +70°C / 10%RH ... 90%RH not condensing
Protection degree	IP40

Connections

Serial interface	9-pole D sub male connector
Battery charger power supply (cod. SWD10)	2-pole connector (positive in the middle)

EMC Standards

Safety	EN61000-4-2, EN61010-1 level 3
Electrostatic discharge	EN61000-4-2 level 3
Electrical fast transient	EN61000-4-4 level 3, EN61000-4-5 level 3
Voltage changes	EN61000-4-11
Electromagnetic interference susceptibility	IEC1000-4-3
Electromagnetic interference emission	EN55020 class B

8.1. DIMENSIONS

The figure below shows printer dimensions.

9. ORDERING CODES

HD40.1 The kit includes: 24-column portable thermal printer, **serial interface**, 57mm paper width, four NiMH 1.2V rechargeable batteries, SWD10 power supply, instruction manual, 5 thermal paper rolls.

HD40.2 The kit includes: 24-column portable thermal printer, **Bluetooth and serial interface**, 57mm paper width, four NiMH 1.2V rechargeable batteries, SWD10 power supply, instruction manual, 5 thermal paper rolls.

The serial cable for PC/instrument connection must be ordered separately.

HD2110CSNM RS232C 8-pole MiniDin - 9-pole D Sub female null-modem cable for connecting the printer to instruments with MiniDIN connector (HD21xx.1 and HD21xx.2 series, HD34xx.2, HD2010, HD2110, etc.).

9CPRS232 RS232C 9-pole – 9-pole D Sub female null-modem cable for connecting the printer to instrument with 9-pole D Sub connectors (Delta Ohm instruments: HD22xx.2 series, HD25.2, etc.).

SWD10 100-240Vac/12Vdc-1A Mains battery charger.

BAT.40 Spare battery pack for HD40.1 and HD40.2 printers with in-built temperature sensor.

RCT The kit includes 4 thermal paper rolls 57mm wide and 32mm in diameter.

INDEX

CERTIFICATO DI CONFORMITÀ DEL COSTRUTTORE

MANUFACTURER'S CERTIFICATE OF CONFORMITY

rilasciato da
issued by

DELTA OHM SRL STRUMENTI DI MISURA

DATA
DATE 2007/10/25

Si certifica che gli strumenti sotto riportati hanno superato positivamente tutti i test di produzione e sono conformi alle specifiche, valide alla data del test, riportate nella documentazione tecnica.

We certify that below mentioned instruments have been tested and passed all production tests, confirming compliance with the manufacturer's published specification at the date of the test.

La riferibilità delle misure ai campioni internazionali e nazionali delle unità del SIT è garantita da una catena di riferibilità ininterrotta che ha origine dalla taratura dei campioni di laboratorio presso l'Istituto Primario Nazionale di Ricerca Metrologica.

The traceability of measures assigned to international and national reference samples of SIT units is guaranteed by a uninterrupted reference chain which source is the calibration of laboratories samples at the Primary National Metrological Research Institute.

Tutti i dati di calibrazione della strumentazione di test sono conservati presso la Delta Ohm e possono essere visionati su richiesta.

All calibration data for test equipment are retained on Delta Ohm and are available for inspection upon request.

Tipo Prodotto: **Stampante portatile**
Product Type: *Portable printer*

Nome Prodotto: **HD40.1 - HD40.2**
Product Name:

Responsabile Qualità
Head of Quality

DELTA OHM SRL
35030 Caselle di Selvazzano (PD) Italy
Via Marconi, 5
Tel. +39.0498977150 r.a. - Telefax +39.049635596
Cod. Fisc./P.Iva IT03363960281 - N.Mecc. PD044279
R.E.A. 306030 - ISC. Reg. Soc. 68037/1998

GUARANTEE

GUARANTEE CONDITIONS

All DELTA OHM instruments have been subjected to strict tests and are guaranteed for 24 months from date of purchase. DELTA OHM will repair or replace free of charge any parts which it considers to be inefficient within the guarantee period. Complete replacement is excluded and no request of damages are recognized. The guarantee does not include accidental breakages due to transport, neglect, incorrect use, incorrect connection to voltage different from the contemplated for the instrument. Furthermore the guarantee is not valid if the instrument has been repaired or tampered by unauthorized third parties. The instrument has to be sent to the retailer without transport charge. For all disputes the competent court is the Court of Padua.

The electric and electronic devices with the following symbol cannot be disposed in the public dumps. According to the Directive UE 2002/96/EC, the European users of electric and electronic devices are allowed to give back to the Distributor or Manufacturer the used device at the time of purchasing a new one. The illegal disposing of electric and electronic devices is punished by a pecuniary administrative penalty.

This guarantee must be sent together with the instrument to our service centre.

N.B.: Guarantee is valid only if coupon has been correctly filled in all details.

Instrument type ❑ **HD40.1** ❑ **HD40.2**

Serial number _____

RENEWALS

Date _____	Date _____
Inspector _____	Inspector _____
Date _____	Date _____
Inspector _____	Inspector _____
Date _____	Date _____
Inspector _____	Inspector _____

CE

RoHS 2002/95/EC

CE CONFORMITY	
Safety	EN61000-4-2, EN61010-1 LEVEL 3
Electrostatic discharge	EN61000-4-2 LEVEL 3
Electric fast transients	EN61000-4-4, EN61000-4-5 LEVEL 3
Voltage variations	EN61000-4-11
Electromagnetic interference susceptibility	IEC1000-4-3
Electromagnetic interference emission	EN55020 class B