

# Transfer Printer Hermes

Hermes 4N / Hermes 5N Hermes 4F / Hermes 5F

## **Technical Information**





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## Hermes

## Thermal Transfer Printer Technical Information



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## A General Guide to the Documentation

#### **Technical Information**

The present manual contains beside the Technical Specification and the most important instructions for the operator especially information for the integrators of **Hermes** printers. This covers the built-in dimensions, the description of the different interfaces and the pin assignments of the interface cables. Note the directions for use on recommended material and the properties of the thermal printhead in order to avoid damage and premature failure of your **Hermes**.

Every effort has been made in the creation of this manual to provide as much information as possible in an understandable manner.

We welcome your comments and suggestions regarding additions or corrections to improve future editions of this manual. Please, let us know if you have any questions.

#### **Further Documentation**

Complete information on the use of the **Hermes** printers are included in the Operator's Manual.

The programming of the **Hermes** printers is completely compatible to the programming of cab's **Apollo**. Therefore it is possible to use the information, that can be found in the "Programming Instructions - **Apollo**".

Detailed information about service and maintenance are included in the "Service Manual" of the **Hermes**. (e.g. replacement of components, adjustment instructions, circuit diagrams, spare parts lists, etc.)

## Compliances

Hermes complies with the following safety regulations :

- **CE : Hermes** complies with the following safety requirements:
  - EC Low Voltage Directive (73/23/EEC)
  - EC Machinery Directive (89/392/EEC)
    - EC Electromagnetic Compatibility Directive (89/336/EEC/ foll. 93/31/EEC)
- FCC : Hermes complies with the requirements of the FCC regulations part 15 for class A computers. Under disadvantageous circumstances, the operation of these devices may cause interference with radio or TV reception, which has to be eliminated by the operator.

### Trademarks

 $\textit{Centronics} \ \ensuremath{\mathbb{B}}$  is a registered trademark of Centronics Data Computer Corporation.

Macintosh-Computer is a product of Apple Computer, Inc.

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*TrueType* <sup>™</sup> is a registered trademark of Apple Computer, Inc.

Easylabel ® is a registered trademark of Tharo Systems, Inc.

## **Characteristics of the Thermal Printhead**



#### CAUTION !

The thermal printhead is the most sensitive part of your printer. Pay special attention to the following guidelines :

- The glass cover on the printhead must not be touched with the hand. Do not use any sharp items, such as knives or screwdrivers, to clean the printhead.
- 2) During printing, always take care that there is no dirt or foreign objects on the labels in order to avoid impurification of the printhead. This way, the printhead might be damaged.
- Use proper label material with a smooth surface only. A rough surface will affect the printhead and may cause damage and reduce its operating life.
- 4) Clean the printhead regularly with a special printhead cleaning pen, or an isopropyl alcohol soaked cotton swab.
- 5) Print with the lowest possible printhead temperature.

Careful use will allow you to print approximately between 18 to 30 miles (30 to 50 km) of print media before the printhead needs replacing.

Improper usage can cause damage to the printhead.

## **1 Product Description**

#### **General Information**

The Thermal Transfer Printers of the **Hermes** family are especially developed for fully automatic labelling. Therefore the print mechanism is totaly aligned to dispense labels. The printhead is arranged low within the devices to minimize the way of the labels from the peel-off position to labelling position on the product and to increase the labelling rate.

After removing the dispensed label the label strip can be fed back. So the printing of the next label may start at the front label edge.

**Hermes** has two separate label transport systems for forward and backward feed. These systems guarantee a high precision in printing and applying labels independent from the size of the label supply roll.

The **Hermes** is an innovative label printer which may be used in either direct thermal or thermal transfer mode. The programming of the **Hermes** is completely compatible to the **Apollo** printers.

With the high-class printheads (305 dpi near edge printhead at **Hermes 4N/5N** or 300 dpi flat printhead at **Hermes 4F/5F**) it is possible to print bar codes and graphics quick, brilliant and tidy.

The double lined LCD display keeps the operator constantly informed about the current status of the printer. The setup menu allows easy configuration changes whenever desired.

The options PCMCIA-memory-card and keyboard adapter, which are offered in the **Apollo**-program, may also be used for **Hermes.** 

#### Important Information about Printing with Hermes

The print mode of the **Hermes** is designed for fully automatic labelling. Therefore after the start of a print job **Hermes** needs two additional signals for the processing of every single label :

- a start signal that releases printing and dispensing of the label
- a signal that shows the removing of the label from the peel position.

#### NOTICE !



If you operate Hermes with a non-cab-applicator make sure that the applicator or the control system can generate these two signal. A simple print mode without the "start" and the "removed" signals is not available.

All cab applicators provide the needed signals.

	The present doo types :	cumentation contains the description of four different Hermes
	PartNo.	Description
	5537500	Hermes 4N
	5537501	Hermes 5N
	5537503	Hermes 4F
	5537506	Hermes 5F
	The most impor	tant differences between Hermes types are :
	- the type of the	printhead
	Hermes 4N/5	N : Near edge printhead with 305 dpi
	Hermes 4F/5F	F : Flat printhead with 300 dpi
	Hermes 4N/4 Hermes 5N/5	F : 11.8" / 300 mm
	Further the devi between the typ	ices only will be called as <b>Hermes</b> , where are no differences bes.
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Overwiew	<b>PartNo.</b> 5537742 5537742 5537743 5537745 5537745 5537747 5537748 5942471	onal Features of the Hermes familiy the following optional features are Description Warning Sensor Label End Hermes 4 Warning Sensor Ribbon End Hermes 5 Warning Sensor Ribbon End Hermes 5 Warning Sensor Ribbon End Hermes 5 Warning Light Feet Hermes 4/5 Bracket Hermes 4

PC Keyboard Adapter PC Card, 2 MB PC Card, 4 MB

5533900 5560406 5560405

## **Technical Specifications**

Туре :	Direct thermal/ Thermal transfer printer		
Printhead :	Hermes 4N/5N : Thin film transfer printhead in near edge technology Hermes 4F/5F : Thin film transfer printhead in flat head technology		
Resolution:	Hermes 4N/5N : 305 dpi = 12 dots / mm Hermes 4F/5F : 300 dpi = 11.8 dots / mm		
Number of dots/ line :	1280		
Print width :	Hermes 4N/5N : 4.2 in (106.6 mm) Hermes 4F/5F : 4.3 in (108 mm)		
Print speed :	Hermes 4N/5N : 4, 5, 6, 7, 8 ips (100, 125, 150, 175, 200 mm/s) Hermes 4F/5F : 2.6, 4, 5.2, 6.5, 8 ips (66, 100, 133, 166, 200 mm/s)		
Available fonts :	5 Bitmap fonts incl. OCR-A and OCR-B 3 scaleable fonts (Speedo™) - internally Speedo™ and TrueType™fonts - to load externally		
Character sets :	Windows 1252/1250, IBM Codepage 850/852, ISO 8859-1, ISO 8859-8, EBCDIC, Macintosh, Supports all Western and Eastern European Latin characters		
Character size :	For scaleable fonts : For Bitmap fonts :	width and height .035 to 5 in (0,9 - 128mm) are individually changeable width and height .04 to .12 in (1 - 3 mm) the size is selectable up to a factor of 10	
Font style :	bold, italic, underlined, r	nirror-inverted, outlined, revers, grey	
Font rotation :	Bitmap fonts/Bar codes : 0°, 90°, 180°, 270° Scaleable fonts : optional, texts in circular format		
Graphic elements :	Line, box, circle, ellipse,	fill-in segment, arrow	
Graphic file type:	.PCX, .IMG, .BMP, .TIF, .GIF und .MAC files		
Bar codes :	Lineal codes for industry, logistics, medicine : Code 39, Code 93, Code 128 A,B,C, Codabar,FIM, HIBC, Interleaved 2/5, Ident-/Leitcode der Deutschen Post AG, MSI, Plessey, Postnet, Lineal codes for the trade : EAN-8, EAN-13, EAN-128, EAN/UCC 128, EAN/UPC App 2, EAN/UPC App 5, JAN-8, JAN-13, UPC-A, UPC-E Area codes : Data Matrix, PDF417, UPS-Maxicode		
	Bar code height, modul with, and ratio are variable, with/without check digit, human readable character, start/stop character		

Processor :	32 Bit, Motorola		
Memory :	Internal memory 2 MB		
PCMCIA connector :	for PC Card 512 KByte, 2 MByte, 4 MByte		
Interface :	Serial : RS-232, RS-422, RS-485 1200-57600 Baud Parallel : Centronics		
Peripheral ports :	<ul> <li>Interface for the connection of non-cab-applicators and for the signals of the warning sensors label/ribbon end</li> <li>SPI-Interface for the connection of cab-applicators</li> </ul>		
Ribbon saver :	The printhead only will be pressed against the print roller if the printer has to print information. At the other time the printhead will be lifted and the transport of the transfer ribbon will be stopped.		
Backfeed :	In order to start the print of a label always from the front edge the label strip may fed back after the completion of the previous label print. To avoid an abrasion of the transfer ribbon at the label the printhead wil be lifted during the backward transport.		
Test features :	System test when switching on Self test with printout of firmware data and system parameters		
Label material :	Thermal paper, normal paper, plastic foil, PE, PP, PVC, Polyamide Adhesive labels : 60-160 g/sqm Material width : 4.7 in (120 mm) Label width : .4-to 4.5 in (10-116 mm) Label length : .2 to 21.5 in (5-546 mm) Core diameter : 3 in (76 mm) Supply roll diameter : Hermes 4N/4F : up to 7.9 in (200 mm) Hermes 5N/5F : up to 11.8 in (300 mm) Labels may be wound face-in or face-out on the supply roll		
Internal rewinder :	To rewind the backing paper Core diameter : 1.6" (40 mm) Max. rewinding diameter : Hermes 4N/4F : 5.7 in (145 mm) Hermes 5N/5F : 8.3 in (210 mm)		
Material recognition :	<ul> <li>Gap sensor ("see through")</li> <li>Bottom reflective sensor</li> <li>Top reflective</li> <li>adjustable from .08 to 1.85 in (2 to 47 mm)</li> </ul>		

Transfer ribbon :	Type : Hermes 4N/5N : preferably ribbons designed for the use with near edge printheads         Hermes 4F/5F : standard ribbons         Length :       1476' in (450 m)         1968' in (600 m) on inquiry         Width :       max. 4.3 in (110 mm)         Core diameter :       1 in (25 mm)         Max. roll diameter :       3.6 in (92 mm)         Colour :       inside or outside	
Control panel :	4 Function keys with LED display Backlit LCD with 2 lines of text, 16 characters per line LCD can be set to display in 8 different languages	
Control features :	Print stop and error message at the LCD display at - Paper out - Ribbon out - Printhead/ Transport system open	
	Information via peripheral interface and warning light at - passing the adjusted minimum diameter of the supply roll of labels or transfer ribbon (if the warning sensors are installed)	
Dimensions :	Hermes 4N/4F : Heigth : 15.4 in (390 mm), Width : 10.9 in (277 mm), Depth :16.5 in (420 mm) Hermes 5N/5F : Heigth : 21.3 in (542 mm), Width : 10.9 in (277 mm), Depth : 21.3 in (542 mm)	
Weight :	Hermes 4N/4F: 46.3 lb. (21 kg) Hermes 5N/5F: 55.2 lb. (25 kg)	
Operating voltage :	Switcheable between 230 V A.C/ 50 Hz or 115 V A.C/ 60 Hz	
Maximum power input :	1,5 A (at 230 V) / 3 A (at 115 V)	
Circuit protection :	T 4 A (at 230 V) / T 6.3 A (at 115 V)	
Environment :	Operation at 50° to 95°F (10° to 35°C) at a humidity of 30 to 85% Transport at -13° to 158°F (-25° to +70°C) at a max. humidity of 95% non-condensing Storage at 41° to 104°F (5° to 40°C) at a humidity of 5 bis 85%	

#### **Optional Features**

#### Warning Sensor Label End / Transfer Ribbon End

These sensors signalize, when the diameter of the label supply roll respectively the transfer ribbon roll has decreased below a preset thresould value. The messages will be shown by switching on the yellow lamp of the warning light (option). The signals also can be sent to a control system by using the peripheral interface. So the user has the possibility to optimize the moment for loading new media by regarding the whole process.

#### Warning Light

By using the warning light it is possible to recognize the state of the printer with one view. The different colors of the lamps show the several possibilities, whether the printer is switched on, there is an printer error or the preset minimum quantity of labels or transfer ribbon is passed.

#### PC Memory Card

Hermes includes an option for using memory cards in order to permanently store graphics, fonts, databases or whole label formats.

The data can be downloaded via interface.

PCMCIA 2.1 conforming sRAM cards or Flash-EPROM cards are accepted. The maximum capacity is 4 MegaByte.

Using a memory card, the printer can be operated **without** being connected to a computer which represents a great advantage regarding the flexibility.

#### **Keyboard Adapter**

The keyboard adapter allows you to connect your **Hermes** to a MF-2 compatible PC keyboard using the serial interface. This will allow you to modify variable data stored on a memory card.

#### Label Design Software EASYLABEL for Windows

EASYLABEL is an intelligent and useful label design software which is easy to use in connection with your **Hermes**. EASYLABEL can be run on all Microsoft Windows compatible computers.

For further information about EASYLABEL, contact your local reseller.

#### Print Media

Hermes can be operated in direct thermal as well as thermal transfer mode.

For direct thermal mode, only use print material with a thermal-reactive coating. The print image is transferred by heating the material at the printhead, causing a reaction on the surface of the paper and, consequently, darkening the material.

In thermal transfer mode, not only standard paper labels are needed but also the thermal transfer ribbon with a color surface. The printout is created by heating the transfer ribbon, causing a transfer of color particles onto the label.

**Hermes** allows to regulate the heat level and also the print speed. Thus, the **Hermes** offers a wide range of opportunities for usage.

Hermes 4N and Hermes 4F are able to print on labels with a maximum supply roll diameter of 8 in (200 mm) and a core diameter of 3 in (76 mm). Hermes 5N and Hermes 5F can use labels with a maximum supply roll diameter of 12 in (300 mm) and a core diameter of 3 in (76 mm).

The ability of label edge recognition, which guarantees the precise position of the printer output, is accomplished by a moveable photocell. This sensor is controlled by the processor of the **Hermes** and ensures recognition for different sorts of material. There is no need for additional electronic adjustment.

On the following pages, you will find detailed information and specifications concerning suitable materials.

If in doubt, we will perform test prints with your label material to find the best suitable transfer ribbon.

Print Media	a for Direct Thermal Printing	
	The print material must correspond to several important specifications, in orc to ensure high quality printing, and to avoid damage to the printhead or early wear.	
	Using labels which we have tested and which we recommend to our customers, will guarantee a gentle treatment of the printhead. If you want to use material by another supplier, please note the following requirements regarding the condition of thermal printer paper :	
	1. To avoid damage to the printhead, the surface coating must cover the thermal-reactive layer. If the coating is too thin, this may cause a 'pitting' effect on the printhead, i.e. very small explosions during the chemical reaction of the thermal coating quickly resulting in damage to the printhead.	
	2. The surface of the labels should be very smooth to avoid a 'sandpaper' effect on the printhead.	
	<b>3.</b> Always choose material which can be printed on with the lowest possible heat level. The greater the heat level, the shorter the life of the printhead. Moreover, with highest heat levels the phases of heating up and cooling down extend. This may have a negative effect on the print quality, especially if a high print speed is required.	
Print Media	a for Thermal Transfer Printing	
	In thermal transfer mode, a wide range of different label materials may be used. (e.g. normal paper, tag stock, a variety of synthetic material such as polyester foil, etc.)	
	NOTICE ! The print quality greatly depends on the right combination of label material and transfer ribbon. The surface of the labels determines which ribbon material may be used. Unsuitable ribbons may cause an extremely poor print image.	

#### Label/ Tag Media Specifications

Label and tag media to be used for the **Hermes** can be found in the table below. Note this information before ordering your labels.



#### Fig. 1 Label formats

Item		MIN. MAX.		
A	Label width	.4(10) 4.6(116)		
В	Width of the silicon liner	.4(10)	4.7(120)	
С	Label length	.2(5)	21.5(546)	
D	Gap between labels	.08(2) 21.5(546)		
E	Label thickness	.0024(.06) .01(.25)		
F	Thickness of silicon liner	.002(.05) .004(.1)		
G	Distance of the first printing point from the edge of silicon liner	0		
н	Distance of the label sensor from the edge of silicon liner	.08(2) 1.85(47)		
I	Width of punch hole	.2(5) -		
К	Height of punch hole	.08(2)	.2(5)	
L	Width of reflective mark	.2(5)	-	
М	Height of reflective mark	.08(2) .2(5)		

#### Table 1 Label formats in inches (figures in brackets are in mm)

#### **Transfer Ribbon**

The choice of a suitable transfer ribbon is important for the print quality of your printer as well as the useful life of the printhead.

#### NOTICE !

Hermes 4N and Hermes 4F are equipped with a near edge printhead. For that reason choose transfer ribbons which are especially designed for the use with near edge printheads.By using other ribbons only a poor print quality is reacheable. The printouts have no brilliance, the surfaces are dull.

For Hermes 4F and Hermes 5F standard transfer ribbons are usable.

## $\triangle$

#### CAUTION !

Transfer ribbons of inferior quality may cause premature deterioration of the printhead !

The material must be extremely resistant to high temperatures to avoid melting the ribbon with the printhead.

The heat which arises during printing must be carried off by the label and by the transfer ribbon itself. Transfer ribbons of inferior quality are often poor heat conductors. This may cause overheating of the printhead in spite of electronic protection.

Poor transfer ribbons also tend to lose parts of the coating which leads to accumulating dirt on the printhead and the sensors. With some ribbons the color rubs off and soils the printhead. All of these effects contribute to poor print quality.

We have carried out numerous tests with many different ribbons and we recommend you use transfer ribbons made by well-known/ brand manufacturers only. Depending on the label material, several transfer ribbons may be suitable.

The quality of print is determined by the right combination of these materials.

The recognition of the transfer ribbon is sensed by the rotation control of the transfer ribbon unwinder, rather than by photocell sensors. As a result, ribbons with a thinner coating or those with a colored coating can be used safely. To be able to print all labels up to the exact end of the transfer ribbon, the length of the uncoated trailer is limited.

#### NOTICE !

When buying transfer ribbons, make sure that

- the trailer of the ribbon has a maximum length of 4 in (100 mm).
- the trailer is made of nonconductive material of is coated with a nonconductive film.
- the trailer easily can come loose from thecardboard core (F<3N).

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## **2 General Safety Instructions**



#### CAUTION !

- The printers of the Hermes series are built exclusively to print labels.
- Connect the printer only to an outlet with the correct voltage ! The printer is configured for either 230V or 115V power supply, which can be switched using the input voltage selector at the back of the printer. Connect only to a power outlet with a **grounded** contact.
- The printer must only be connected to devices which have extra low voltage.
- Power must be OFF before plugging in any accessory or connecting the printer to a computer, etc. Also switch power off on all appliances before disconnecting.
- Do not expose the printer to any moisture, or use in damp or wet areas.
- The printer will operate with the cover open if necessary. This is not recommended, as moving or rotating parts become accessible. Keep long hair, jewelry, loose clothes away from the moving parts.
- During the print process the printhead will become hot. Use extra caution when touching the printhead.

## **3 Delivery Contents**

Inspect the **Hermes** packaging and contents immediately after receipt for possible damage caused by shipping.

The supplied equipment of the **Hermes** depends on the requested options. Compare the delivered accessories with your order.

#### NOTICE !

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Please keep the original packaging in case the printer must be returned.



Fig. 4a Side view Hermes 4N

- 1 Display
- 2 Function keys with indicator LEDs
- 3 Power switch
- 4 Swing arm with guide roller
- 5 Media supply hub
- 6 Adapter
- 7 Flange
- 8 Knurled knob
- 9 Media rewind hub
- 10 Guide roller
- **11** Print mechanism (Fig. 4e)
- 12 Knurled knob
- 13 Ribbon take up hub
- 14 Knurled knob
- 15 Ribbon supply hub





Fig. 4c Side view Hermes 4F

- 1 Display
- 2 Function keys with indicator LEDs
- 3 Power switch
- 4 Swing arm with guide roller
- 5 Media supply hub
- 6 Adapter
- 7 Flange
- 8 Knurled knob
- 9 Media rewind hub
- 10 Guide roller
- 11 Print mechanism (Fig. 4f)
- 12 Knurled knob
- 13 Ribbon take up hub
- 14 Knurled knob
- 15 Ribbon supply hub





#### Fig. 4e Detailed view of the print mechanism Hermes 4N/5N

- 1 Backfeed roller
- 2 Backfeed system locking unit
- 3 Backfeed system locking lever
- 4 Locking screw for label track adjustment
- 5 Set screw for label track adjustment
- 6 Media guide with locking screw
- 7 Media guide axle
- 8 Transport system locking lever
- 9 Transport system locking unit
- 10 Transport roller
- 11 Label edge sensor
- 12 Knurled knob to adjust the label edge sensor
- 13 Printhead levelling adjustment screw
- 14 Print roller
- 15 Socket of the peripheral port for cab-applicators
- 16 Peel-off edge
- 17 Thermal printhead
- **18** Printhead locking lever
- 19 Adjustable axle for ribbon track adjustment
- 20 Locking screw for ribbon track adjustment





#### Fig. 4g Rear view

- 1 Input voltage selector / Fuse holder
- 2 Input voltage selector cover
- 3 Power supply connector
- 4 Connector warning sensor transfer ribbon end (Hermes 4N/4F only)
- 5 Connector warning sensor label end (Hermes 4N/4F only)
- 6 Connector warning light
- 7 Drillings for mounting a compressed air service unit (option)
- 8 Memory card module slot
- **9** Drillings for mounting a bracket (option)
- **10** Parallel interface port
- **11** Serial interface port
- 12 Plug of the peripheral port for non-cab-applicators

## **5** Connecting the printer

#### **Connection to Power Supply**

The Hermes is designed for use with 230V A.C/50 Hz (standard) or 115V A.C/ 60 Hz.



#### CAUTION !

Before connecting the printer to the power supply, make sure that the voltage selected on the power supply module of the printer is the same as your main power supply ! Pay attention that the power switch (4/5) is in position "O" (OFF).



#### Fig. 5a Power supply module / power switch

To change the voltage setting, open the cover (2) and remove the voltage selector (1) from the power unit.



#### CAUTION !

If you have changed the operating voltage of your printer the fuses (6) need replacing as stated below !

#### 230V - 2 x T 4A 115V - 2 x T 6,3A

When delivered, the correct fuses for the pre-selected operative voltage are installed. You will find the necessary fuses for the other voltage in the accessories package. Slide the voltage selector back into the power supply module so that the correct voltage is visible in the lid window of the cover (2). Connect the printer to a **grounded** outlet using the power cable supplied in the accessories package.

#### **Connection to a Computer**

**Hermes** is equipped with three serial interfaces, these are RS-232, RS-422, and RS-485, all of them using the 25 pin interface connector (**2**) at the back. In most cases, you can use the RS-232 interface for the connection to the computer. If your computer is located more than 50 ft (15 m) away from the printer you should use the RS-422 interface.

The RS-485 interface is provided for using the **Hermes** as part of a networked system.

In addition to the serial port, the **Hermes** also provides a parallel (Centronics) interface which offers a faster transfer of data than the serial interfaces. Therefore, we recommend you use the parallel interface for those applications where a large number of loadable fonts or complex graphics have to be printed. For the Centronics interface use the 36 pin interface connector (1).

Select the required interface settings using the Setup procedure and connect the printer to the computer by a suitable interface cable.



#### CAUTION !

Make sure that all connected computers and their connecting cables are correctly grounded.



1 - Parallel interface port 2 - Serial interface port

Fig. 5b Interface ports (rear view of the printer)



#### Fig. 5c Switch on the printer

After making all connections switch on the printer at the power switch (1/2).

The printer carries out a short system test and following the display is shown the system mode "ONLINE".

If a hardware failure occurs during the system test the type of the failure will be shown. In this case the printer should be switched off and on again. If the failure occurs again call the service.

If the display is not showing anything after switching on the printer, please check the following whether:

- the connection of the power switch is correct
- the setting of the voltage selector corresponds with the power supply voltage
- the fuses in the voltage selector are not defective

If all these conditions are true and the device nevertheless cannot be switched on call for service, please.



#### CAUTION !

If the fuses in the voltage selector are defective do not use the fuses of the delivery contents as spare parts.

These fuses are only for using at the other operation voltage. By using the fuses of the delivered contents without changing the setting of the voltage selector, the printer may be damaged.

## 6 Media loading

#### Preparation of the label supply hub



Fig. 6a Preparation of the label supply hub

**Hermes** is equipped with a rotating label supply hub, which is able to take up rolls with a core diameter of 3 in (76 mm).

To take up these label rolls it is necessary to mount two adapters  $(\mathbf{3})$  onto the supply hub :

- Put the first adapter (3) onto the supply hub (4) and slide it to the wind plate (1) until it blocks. Tighten the knurled srew (2).
- Put the second adapter onto the supply hub (4) and slide it against the wind plate until the distance between the outer edge of the adapter and the wind plate (1) is a little less than the width of the label roll. Tighten the knurled screw.



#### Fig. 6b Media loading Hermes 4N/5N

- 1. Place the label roll (1) onto the prepared media hub (3) and slide it against the wind plate (5). The solid line represents the feed path of outside-rolled labels, the broken line of inside-rolled labels.
- 2. Put the flange (4) on the supply hub (3), slide it against the label roll (1) and fix it at the supply hub by tightening the knurled knob (2).
- Swing the three levers (9, 19 und 16) clockwise until they stop and open this way the transport system (10,11) and the backfeed system (17,18). The printhead (15) also will be unlocked from the print roller.
- 4. Loosen the knurled knob (12) and slide the media guide (13) into its outermost position.





#### Fig. 6d Loading thermal transfer ribbon

- 1. To lift the printhead (5), turn the printhead lever (4) clockwise until it stops.
- 2. Slide the roll of transfer ribbon (6) onto the ribbon supply hub (7) as far as possible.

#### NOTICE !

Pay attention to the side of the ribbon material which is coated with ink ! The inked side is generally the dull side. When the ribbon is inserted, the inked side must face the opposite side of the printhead ! In Figure 6c, the solid line shows the path of inside wound ribbon, and the broken line represents the path of outside wound ribbon.

- Hold tight the ribbon supply hub (7) and rotate the knurled knob (8) clockwise until it stops. That way the transfer ribbon roll (6) will be attached to the ribbon supply hub (7).
- 4. Slide an empty cardboard core (1) onto the ribbon take up hub (2) and fix it by clockwise turning the knurled knob (3).
- 5. From the side, feed the transfer ribbon along the path as shown in Figure 6d, then attach it to the core (1) using adhesive tape or a label.
- 6. Turn take up hub (2) counterclockwise in order to smooth and stretch the ribbon.
- 7. To lock the printhead (5), turn the lever (4) counterclockwise until it stops.

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#### cab - Produkttechnik GmbH



#### Fig. 7b Adjustment of the printhead support

When printing narrow labels (label width less than the half of the maximum print width), it is possible that the printhead will come into direct contact with the drive roller. This will lead to premature wear on the printhead. In addition, the printhead will be at a slight angle to the label, thus, the uneven pressure may result in an inconsistent image density from one edge of the label to the other.

To correct this problem, the printhead support (2) may be adjusted. Adjust printhead support as follows :

- 1. Loosen the knurled screw (3).
- Move the knurled screw (3) as required within the adjustment slot (4). This will cause the cam shaped printhead support (2) to rotate, in effect, providing a higher or lower base on which the printhead mounting (1) rests.
- 3. It is convenient to use the position **3a** to print large labels. In this case the printhead support **(2)** is totally inactiv.
- 4. By using small labels it is necessary to adjust the printhead support. In this case insert a second strip of the label at the front side of the print roller. Now slide the knurled knob (3) as far as possible to position 3b in the adjustment slot (4), until the printhead support (2) touches the printhead mounting (1). Take away the second label strip.
- 5. Tighten the knurled screw (3).

#### Adjustment of the Label Tracking



#### Fig. 7c Adjustment of the label tracking (backfeed system)

It is necessary to adjust the label tracking, if the label strip sideward leaves the normal path.

Such a drift may cause :

- a sideward displacement of the printed images at the label.
- a sideward displacement of the peel position.
- a paper jam or a damage of the label strip.

To correct this problem, the backfeed system may be adjusted as follows :

- 1. Loosen the locking screw (2) at the backfeed system.
- 2. Adjust the label tracking by turning the set screw (3).

If the labels drift inwards If the labels drift outwards ⇒ Turn the set screw clockwise. ⇒ Turn the set screw counterclockwise.

Repeat the adjustment as long as necessary. After every adjustment step open and close the backfeed system by turning the lever (1).

3. Tighten the locking screw (2).



#### Fig. 7d Adjustment of the transfer ribbon

If creases, lines or black patches appear in the print image resulting in a poor print quality, this may be caused by wrinkles in the transfer ribbon (4). To remove the wrinkles, the tension of the ribbon should be made even from the left to the right by slanting the axle (1).

- 1. Loosen the locking screw (2).
- The axle may be slanted by moving the locking screw (2) as required inside the adjustment slot (3). Moving it to the bottom will tightened the ribbon on the inner edge. In the other case it will be done on the outer side of the transfer ribbon.

To reduce the formation of wrinkles the ribbon must be tightened at this side where the wrinkles will be built

3. After completing the adjustment, tighten the locking screw (2).

## 8 Options

#### Applicators

#### Non-cab-Applicators

The Thermal Transfer Printers of the **Hermes** family are especially developed for fully automatic labelling. Therefore all types of **Hermes** are equipped with a peripheral port with a minimum configuration of signals. That way it is possible to operate many different non-cab-applicators at the **Hermes**.



#### Fig. 8 a Peripheral port for non-cab-applicators

For the use of Hermes with a non-cab-applcator two input signals are needed :

1. "Print start"

Since the label will be dispensed from the liner directly after printing, it is necessary to make sure, that the applicator is ready to take the label when sending the signal "Print start".

2. "Label is taken"

This signal is needed to start the backfeed of the label material. After the backfeed the print of the next label can be started from the front edge. It is also necessary to activate this signal, if the parameter "Backfeed" in the setup is set to "smart". Otherwise the next "Print start" signal will not be accepted.

Beside the described input signals it is possible to get some status information via the peripheral port.

The complete interface description is included in the appendix B.



Fig. 8 b cab-Applicators for Hermes

**cab** offers a own line of applicators (1) for the printers of the **Hermes** family. To connect these applicators the cab-types of **Hermes** have aditionally a second peripheral port (3) at the front side.

Typically for the cab-applicators, the dispensed label will be taken by a vacuum plate (**2**). After that different pneumatic cylinders move the plate to the labelling position where the label will be pressed or blown onto the product. The size of the vacuum plate is specified for the label size.

The following table shows some standard versions of cab-applicators :

Applicator type	Labelling destin.	Labelling type
Tamp Applicator with Lift Cylinder	downwards	press on
Tamp Blow Applicator with Lift Cylinder	downwards	blow on
Tamp Applicator with Swing & Lift Cylinder	sidewards	press on
Blow Applicator with Swing Cylinder	sidewards/ upwards	blow on

#### Table 8 cab-applicator types

For use in a networked system all cab-applicators are equipped with a PLC interface with potential free inputs and outputs .

For the detailled description of the **cab**-applicators several Operator's Manuals are available.

#### Bracket

The delivery program of the **Hermes** series includes brackets for **Hermes 4** and **Hermes 5**. These mounting elements allow to hang in the printer in to a production line. For that the bracket first must be mounted onto a profile. After that the printer can be hung in into the bracket and fixed by screws.

The delivery contents of the bracket (1) include a clamp (2) for mounting the bracket (1) at a profile with a cross-section of 50mmx50mm. The clamp is made of three parts assembled by screws (3).



#### Fig. 8 c Bracket with clamp

The form of the clamp allows to mount the bracket onto a horizontal as well as a vertical profile. Besides the bracket can be moved sideward inside the clamp. This way the bracket can be adjusted to different centers of gravity when differnt applicators are used at the **Hermes**.





#### Fig. 8 e Mounting the printer at the bracket

Hermes has one each bolt (4) at the front and the rear side. Using these bolts the printer is hung in into the grooves of the bracket (1). After that the printer is fixed at the bracket with six screws (5).

#### Feet

Using the profile feet **Hermes** can be put directly on a table. Its also possible to mount the printer onto a customer specific head plate. The feet are fixed from below with four screws at the frame of the printer. The shorter foot has to be mounted below the print machanism.







Fig.8 g Set up the printer on a table



Fig. 8 h Set up the printer on a head plate

#### Warning Light

By using the warning light it is possible to recognize the state of the printer with one view.

For mounting the warning light it is recommended to use the option "Bracket".



#### Fig. 8 i Connection of the warning light

- 1. Fix the warning light (1) at the bracket (3). Use the two screws (2) which are included in the delivery contents of the light.
- 2. Contact the connection cable (4) of the warning light at the socket (5).

During the operation the lamps have following functions :

green	Device is switched on, voltage is available.
yellow	Warning : labels respectively transfer ribbon have passed the preset minimum quantity. Function is only available when the warning sensor label end is mounted.
red	Printer error Further information about the kind of error is shown at the display.

#### Warning Sensors

The sensors recognize, when the diameter of the label supply roll respectively the transfer ribbon roll decreases below a preset thresould value.



#### NOTICE !

The messages of the sensors are only intended to inform the operator. They do not influence the operation of the Hermes, i.e. the operation is not interrupted.

The messages will be shown by switching on the yellow lamp of the warning light (option). The signals also can be sent to a control system by using the peripheral interface.

#### Warning Sensor Label End

#### Mounting

- 1. Switch off the printer
- 2. Slide the sensor holder (1) with the warning sensor label end (2) behind the wind plate (6) of the media supply hub.
- Attach the sensor holder with the slotted head screw (7) and the hexagon socket head screw (3) to the mounting plate. The hexagon socket head screw (3) must be used at this side, where the elongated hole is located in the sensor holder.
- 4. Plug the cable (4). For that **Hermes 4** has a 5-pin connector at the rear side of the frame. The connector (10) at **Hermes 5** is beside the control panel.

#### Adjustment

With this setting the threshold diameter (3.3 to 4.3 in / 84 to 110mm) for the warning message can be adjusted.

- 1. Slide a label roll (9) with the intended threshold diameter onto the media supply hub.
- Switch on the printer. The sensor (2) sends out a beam (5). If the label roll does not interrupt the path of the beam, the beam is mirrored at the reflective foil (8) and detected again by the sensor. In that case the LED at the sensor is on.
- 3. Loosen the hexagon socket head screw (3) and swing the sensor holder against the axle of the media supply hub as near as possible. The LED at the sensor is off.
- 4. Slowly swing the sensor holder away from the axle until the LED at the sensor goes on.
- 5. Tighten the hexagon socket head screw (3).



#### Warning Sensor Ribbon End



#### NOTICE !

The warning sensor ribbon end is analyzed by the printer electronics only if the warning sensor label end is installed too.

#### Mounting

- 1. Switch off the printer
- 2. Attach the sensor holder (7) with the warning sensor ribbon end (8) using the screws (6) to the mounting plate.
- 3. Plug the cable (9). For that **Hermes 4** has a 3-pin connector at the rear side of the frame. The connector (10) at **Hermes 5** is beside the control panel.
- The contents of delivery include a reflective foil (2). Remove the covering foil from the glued surface an stick the reflective foil (2) onto the bracket (3) below the ribbon hubs as shown in fig.8m. Make sure that the distance between the reflective foil and the mounting plate (1) is about 0.6in (15mm).



Fig. 8 m Placing the reflective foil

#### Adjustment

With this setting the threshold diameter (1.4 to 1.6in / 34 to 41mm) for the warning message can be adjusted.

- 1. Slide a transfer ribbon roll (4) with the intended threshold diameter onto the media supply hub.
- Switch on the printer. The sensor (8) sends out a beam (5). If the ribbon roll does not interrupt the path of the beam, the beam is mirrored at the reflective foil (2) and detected again by the sensor. In that case the LED at the sensor is on.
- 3. Loosen the screws (6) and move the sensor holder to the right as far as possible. The LED at the sensor is off.
- 4. Slowly move back the sensor holder to the left until the LED at the sensor goes on.
- 5. Tighten the screws (6).





The front control panel of the **Hermes** is fitted with 4 function keys with indicator LEDs, and a 2x16 character digital LCD display.



Fig. 9 Control Panel

The control panel display constantly provides the operator with the actual information concerning the current printer mode and label processing. The indicator LEDs support the information shown in the display by indicating which keys have to be pressed. (e.g. in the event of a fault)

On the following pages, you will find descriptions of the system modes of the **Hermes**, the related indications by the LCD display an the LEDs as well as a description of the function keys under differing conditions.

### System Mode ONLINE

	ONL key	Switch into OFFLINE mode (LED ONL off)
	FF key	Provides label feed. The leading edge of the next label to be printed is in print position.
	CAN key	Deletes data of the previous print job in internal memory. Following that, "Pause reprint" is not available. (see PSE key)
A Bed	PSE key	Repeats the print of the last label, after the previous print job has been completed. (only if setup parameter 'Pause reprint' is on)
	ONL key + CAN key	Pressing both keys together for at least 5 seconds will switch into the SETUP mode. (LED ONL off)

## System Mode OFFLINE

ONL	ONL key	Switch into ONLINE mode (LED ONL on)
	FF key	Provides label feed. The leading edge of the next label to be printed is in print position.
CAN •	CAN key	Switch into LABEL FROM CARD mode. (only if memory card is installed and formats are stored it)
PSE	PSE key	Display shows current printer mode

## System Mode PRINT

	CAN key	short pressing :	Cancels the current print job, Switch to the next job in the input buffer
		longer pressing (>1s):	Cancels the current print job, Deletes the input buffer (LED CAN blinks), Switch into ONLINE mode
PSE	PSE key	Interrupts the current print job, Switch into PAUSE mode (LED PSE on)	

### System Mode PAUSE

	FF key	Provides label feed. The leading edge of the next label to be printed is in position.
	CAN key	Cancels the current print job, Switch into ONLINE mode (LED PSE off)
PSE	PSE key	Continues the current print job, Switch into PRINT mode (LED PSE off)

## System Mode LABEL FROM CARD

ONL	ONL key	Switch into OFFLINE mode
O FF ↓	FF key	For scrolling down within the file list stored on the card. Reduces the quantity of labels to be print.
CAN t	CAN key	For scrolling up within the file list of the card. Increases the quantity of labels to be printed.
PSE	PSE key	Confirms file selection. Moves the cursor to be right when setting the quantity of labels to print. Switch into PRINT mode

## 10 Setup

This mode is initiated by **either** simultaneously pressing the key and the key when switching on the printer and keep them pressed down until the system test is completed, **or** in ONLINE mode, press the same two keys down for at least 5 seconds. In this mode a lot of printer parameters could be adapted to the concrete using. The setup mode can be left at any point by pressing the key. The confirmed parameters will be saved.

key, the  $\overset{\circ}{\underset{\bullet}{\overset{\circ}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}{\overset{\bullet}}{\overset{\bullet}{\overset{\bullet}}{\overset{\bullet}{\overset{\bullet}}{\overset{\bullet}{\overset{\bullet}}{\overset{\bullet}{\overset{\bullet}}{\overset{\bullet}{\overset{\bullet}}{\overset{\bullet}}}}}}$  key simultaneously and keep them pressed down until the display shows "--- RESTORE ----".

#### Function keys in the SETUP mode

OONL	ONL key	Stores the chosen settings of the setup-parameters and completes the SETUP mode. (i.e. switch into ONLINE mode (LED ONL on)
O FF	FF key	Skips to next setup parameter. Reduces numerical setup values.
	CAN key	Skips to previous setup parameter. Increases numerical setup values.
PSE	PSE key	Confirms selected settings for parameters.



## 11 Error Messages / Problem Solution

#### **Correctable Errors**

While processing a print job, an error has occured which may be corrected by the operator, and also allows you to continue the print job after fault correction.

Display :	The top line of the display shows alternately the type of fault
	and the total of the remaining labels of the current print job.

LED Display : LED CAN on, LED PSE is flashing.

#### **Function Keys**

	CAN key	Cancels the current print job. Switch into ONLINE mode. (LED ONL on, LED CAN off, LED PSE off)
PSE	PSE key	Continues current print job after error correction. Switch into PRINT mode. (LED ONL on, LED CAN off, LED PSE off)

#### **Irrecoverable Errors**

While switching on the printer or during printing, a fault has occured which cannot be cleared by the operator without cancelling the current print run (e.g. hardware fault).

**Display :** This display shows the type of fault.

LED Display : LED CAN is flashing.

#### **Function Keys**

ff) ch printer on and off ical Service.
ff) ich prii ical Se

## **Appendix A - Built-in Dimensions**

The devices of the **Hermes**-family are prepared to build in an assembling line. For that reason there will be offered a fitting clamp for the hanging mounting and in the other case feet for a standing mounting.

Of course you are able to order Hermes without any options and use own fitting elements.

Certainly by ordering the option clamp the fitting holes for the mounting of the warning light (option), a compressed air service unit for the pneumatic applicator and standard mounting elements (e.g. flange FKV 50 respectively profile EV 50 of the firm Rose&Krieger Verbindungstechnik GmbH) will be delivered.

The feet of Hermes are shaped in such a way that the printer may be fitted at the setting area with suitable clamps and so the Hermes will be saved against sliding.

## $\bigwedge$

#### CAUTION !

If you have purchased the printer without feet, avoid to place it upright. Due to the missing feet, the printer may fall on its front side, where its own weight rests on the print mechanism. This may cause damage to the printer.

The drawings at the next pages show the most important function dimensions to integrate the Hermes :

- Page A-2 : Hermes 4N
- Page A-3 : Hermes 4F
- Page A-4 : Hermes 5N
- Page A-5 : Hermes 5F











Pin	Signal	Function	
1	CG	Protective Ground	
2	TxD	Transmit Data (RS-232)	
3	RxD	Receive Data (RS-232)	
4	RTS	Request to send	
5	CTS	Clear to send	
7	GND	Logic Ground	
9	TDATA+	Transmit Data (RS-422, RS-485)	
10	TDATA-	Transmit Data (RS-422, RS-485)	
18	RDATA+	Receive Data (RS-422, RS-485)	
19	RDATA-	Receive Data (RS-422, RS-485)	
20	DTR	Data Terminal Ready	

#### Table B-1 Signals of the serial interface connector



The following chapter shows some typical RS-232 interface cable configurations. Note, that the pin assignment may vary for different computers. If you have any problems with the connections, contact the manufacturer of your computer on the pin assignment of the interface. Use the pin assignment of the printer as shown in Table B-1 to obtain a suitable cable.



Fig. B-2 Interface cable with 25 pin computer connector for RS-232 with protocol " --- " or "XON/XOFF"









Fig. B-6 Centronics interface connector (rear of the printer)

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
1	/STROBE	10	/ACKNLG	19	GND	28	GND
2	DATA 1	11	BUSY	20	GND	29	GND
3	DATA 2	12	PE	21	GND	30	GND
4	DATA 3	13	SLCT	22	GND	31	nc
5	DATA 4	14	nc	23	GND	32	nc
6	DATA 5	15	nc	24	GND	33	nc
7	DATA 6	16	GND	25	GND	34	nc
8	DATA 7	17	nc	26	GND	35	nc
9	DATA 8	18	nc	27	GND	36	nc

Table B-2 Signals of the Centronics interface

#### **Centronics Interface Cable**

The cables used for Centronics interface connectors are standard cables, so that normally there are no problems with the external control of the **Hermes**.

In the event of any difficulties, consult the manufacturer of your computer on the pin assignment of the computer's interface. Use the pin assignment of the printer as shown in Table B-2 to obtain a suitable cable.

#### Pin Assignment of the Peripheral Connector for Non-cab-Applicators

**Hermes** has a 15 pin SUB-D plug at the rear side. The signal set of this interface includes on the one hand the signals needed to couple a non-cab-applicator and on the other hand status signals of the warning sensors "label end" and "ribbon end".

All inputs and output are potential-free.



#### CAUTION !

This interface is not designated to couple a cab-applicator. For the use of cab-applicators the Hermes printers have an additional interface with a 15 pin SUB-D socket at the front side.



Fig. B-7 Plug of the Peripheral Connector

Pin	Direction	Description
1	output	printer not ready
2	output	label is printed
3	output	printer error
4	output	print job available
5	output	green (device is switched on)
6	input	external error
7	input	label was taken
8	input	print start
9	output	warning transfer ribbon end
10	(output)	reverse line (for all output signals)
11	output	warning label end
12	output	label in present position
13	(input)	external error (reverse line)
14	(input)	label was taken (reverse line)
15	(input)	print start (reverse line)

#### Table B-3 Pin-Assignment of the Peripheral Connector Plug



The inputs are optocouplers with a current limiting resistor of  $2.4 k \Omega\,$  in the input circuit.



Fig. B-8 Circuit of the inputs

For each signal [IN] there is a separate reverse line [IN]R via the plug connector. From that the following pairs of signals result :

[IN]	Pin [IN]	Pin [IN]R
Print start	8	15
Label was taken	7	14
External error	6	13

Table B-4 Pairs of input signals

All  ${\it outputs}$  are switched by relays which all have one common reverse line (PIN 10 of the the plug).



#### Fig. B-9 Circuit of the outputs

Electrical requirements :  $U_{max} = 42 V I_{max} = 100 \text{ mA}$ 

#### Comments to the signals

#### Printer not ready

There is an error by operating of the **Hermes** or the printer is OFFLINE. The print of a label requires the readiness of the printer. If the signal is active, the relay in the output circuit is closed.

#### Label is printed

At this time **Hermes** prints a label. If the signal is active, the relay in the output circuit is closed.

#### Printer error

There is an error in the operation of the **Hermes**. The details and type of error can be learnt from the printer display. ('Ribbon out'; 'Paper out'; 'No label') If the signal is active, the relay in the output circuit is closed. After error correction, the print of the last label will be repeated. The error activates the signal 'Printer not ready', too.

#### Print job is available

**Hermes** has a print job (requirement to print a new label). If the signal is active, the relay in the output circuit is closed.

#### Green

The voltage at the **Hermes** is switched on. If the signal is active, the relay in the output circuit is closed. The green lamp of the warning light is compatible to the signal 'Green'.

#### External error

There is an error at the connected applicator or in the whole process. The print job will be broken and at the display of the printer the error message 'Host stop / error' will be shown. After removing the error the last label will be printed again.

The error activates the signal 'Printer not ready', too.

The signal is active in the live mode of the input circuit (pin 6, pin 13).

#### Label was taken

The printer gets the information that the connected applicator has taken the printed label from the peel position (a new label may be printed). This signal is active in the live mode of the input circuit (pin 7, pin 14).

#### Print start

This releases the start of the print if :

- there is no label in the peel position
- a print job was sent to the printer
- the printer is ready

The signal is active in the live mode of the input circuit (pin 8, pin 15)

#### Warning transfer ribbon end

Message of the warning sensor transfer ribbon end.

The diameter of the ribbon supply roll has decreased below the adjusted minimum value.

If the signal is active, the relay in the output circuit is closed.

#### Warning label end

Message of the warning sensor label end. The diameter of the label supply roll has decreased below the adjusted minimum value.

If the signal is active, the relay in the output circuit is closed.

#### Label in present position

A printed label is in the present position. Message for the connected applicator to start the labelling process. If the signal is active, the relay in the output circuit is closed.

PartNo.	Description	Hermes			
		4N	5N	4F	5F
5521552	Spring	x	x	x	х
5521553	Wall Spacer	x		x	
5521555	Shell	x	x	x	х
5521560	Rewinder End Cap	x	x	x	х
5521561	Shell	x	x	x	х
5521564	Rewinder Wall Plate	x	x	x	х
5530376	Friction Felt	x	x	x	х
5537643	PCB CPU Hermes 4/5 F			x	х
5537666	Backfeed Locking System	x	x	x	х
5537667	Label Sensor Assy.	x	x	x	х
5537698	Backfeed Roller	x	x	x	х
5537730	Wall Spacer		x		х
5537752	Printhead	x	x		
5537753	Main Drive Motor	x	x	x	х
5537754	Ribbon Sensor Board	x	x	x	х
5537760	PCB CPU Hermes 4/5	x	x		
5537762	Stepper Motor	х	x	x	х
5537770	Transport Roller	x	x	x	х
5537771	Print Roller	x	x	x	x
5537775	Transport Locking Roller	x	x	x	х
5537845	PCB Driver Electronics	x	x	x	х
5537848	PCB Printhead Adapter	x	x		
5537996	PCB Warning	x	x	x	х
5560434	Printhead NM3004-UA21B			x	x

## Appendix C - Spare Parts List (Extract)

Wearing parts are printed bold



Gesellschaft für Computerund Automations-Bausteine mbH & Co. KG Wilhelm-Schickard-Str. 14 D-76131 Karlsruhe

#### **EU - Conformity Declaration**

We declare herewith that as a result of the manner in which the machine designated below was designed, the type of construction and the machines which, as a result have been brought on to the general market comply with the relevant fundamental regulations of the EU Rules for Safety and Health.

In the event of any alteration which has not been approved by us being made to any machine as designated below, this statement shall thereby be made invalid.

Description: Thermal Transfer Printer Type: Hermes

Applied EU Regulations and Norms:

#### - EC Machinery Regulations

- Machine Safety
- EC Low Voltage Regulations
- Data and Office Machine Safety

#### - EC Electromagnetic Compatibility Regulations

- Threshold values for the Interference of Data Machines
- Interference Resistance in both Industrial and Small Plants

Signed for, and on behalf of, the Manufacturer :

cab Produkttechnik Sömmerda Gesellschaft für Computerund Automationsbausteine mbH 99610 Sömmerda

Sömmerda, 10.07.98

Geni and

Erwin Fascher Managing Director **89/392/EEC,Appendix IIA** EN 292 T1 & T2:1991-11

73/23/EEC

EN60950:1992 & A1:1993 EN 60950/A2:1993

89/336/EEC EN 55022:1995-05

EN 50082-1: 1992-12