

THERMOMAX

NETLINK HARDWARE

USER MANUAL

BENUTZERHANDBUCH

ENGLISH & DEUTSCH



A8027A

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INTRODUCTION

The Netlink Hardware is a small compact unit that may be connected to any Thermomax Datalogger product to offer the following options:

NETWORKING

To connect an individual Thermomax Datalogger product as part of a Thermomax Network of up to 32 units.

The Masterlink Software package then facilitates the download of data from any unit on the network.

The Netlink Hardware may be used to connect any of the following:

- SM UNO
- SM UNO M
- SM DUE
- SM QUATTRO
- SMX 100
- MDX 100

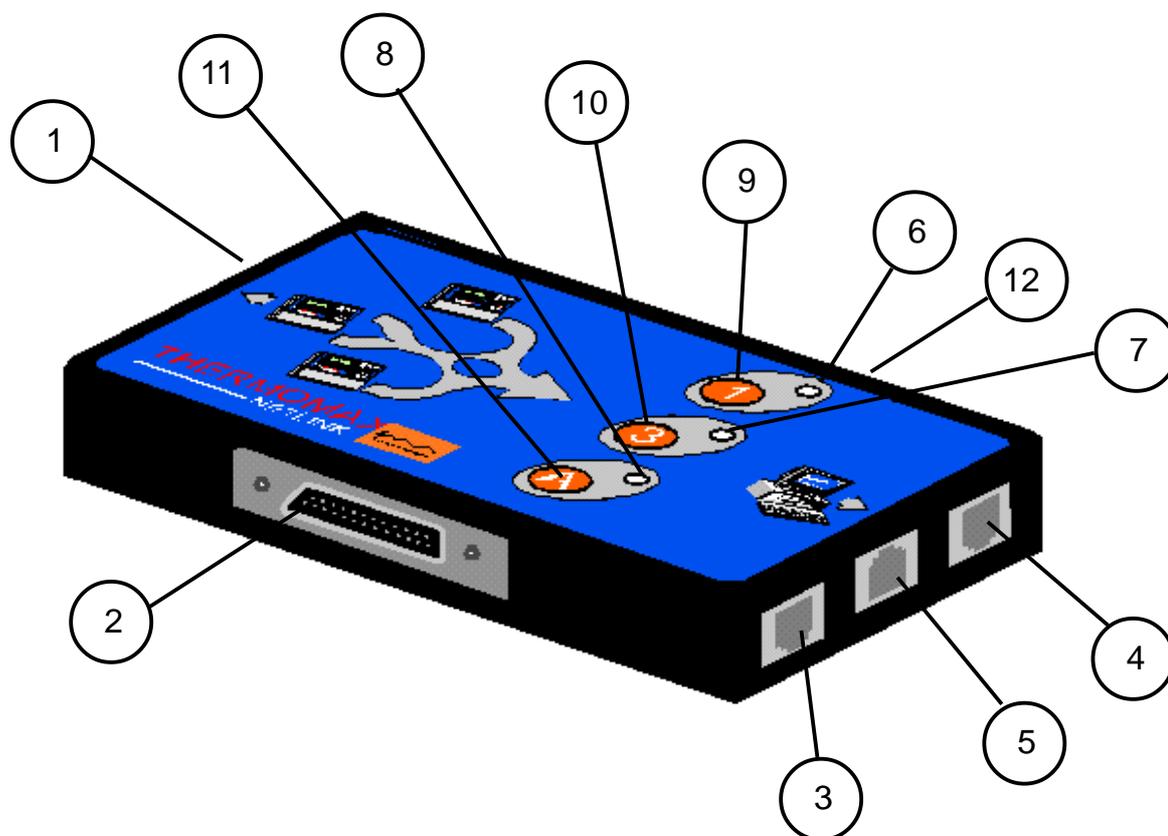
NOTE: The LCT-2 Network Datalogger may be connected directly to a Thermomax network without the need for a Netlink Hardware.

PRINTING

Any Thermomax Datalogger unit can be connected via the Netlink Hardware to a standard PC Printer or a Thermomax Serial Printer, (Part No. A6747). This eliminates the need for a PC.

GENERAL DESCRIPTION

1. Serial Link for connecting a Thermomax unit to the Netlink Hardware, (using 8W shielded cable assembly : 1m (black), Pt. No. A6243).
2. For connecting the Netlink Hardware to a parallel printer, (using A6724 grey Cable assembly).
- 3-4 Network Connections
These connectors are used to link up the Netlink Hardware within a Thermomax Network, (see section 2).
- 5 Connection for:
 - (i) Serial Link for connecting the Netlink Hardware to a P.C.
 - (ii) Serial Link for connecting the Netlink Hardware to a Thermomax Serial Printer, (using cable A7433).



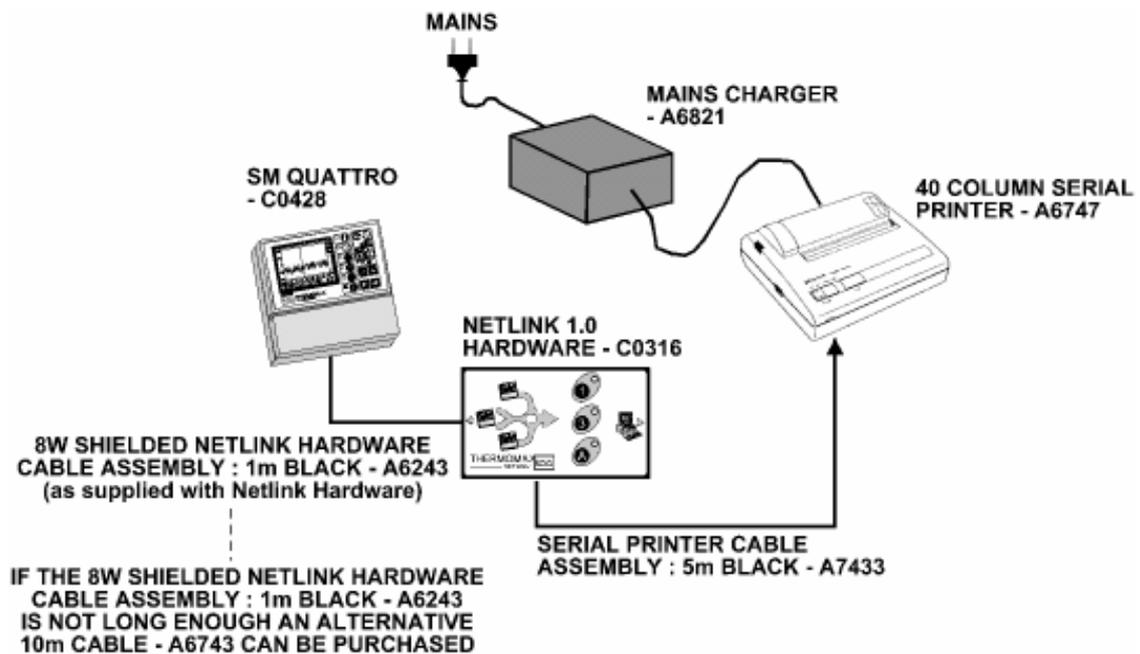
PRINTER MODE:

- 6 This green LED illuminates to indicate that the **1** key has been pressed.
- 7 This green LED illuminates to indicate that the **3** key has been pressed.
- 8 This green LED illuminates to indicate that the **A** key has been pressed.
- 9 Pressing the **1** key allows the user to print 1 day's temperature data.
- 10 Pressing the **3** key allows the user to print 3 day's data.
- 11 Pressing the **A** key allows the user to print the data from all days.
- 12 For all units supplied outside the UK, an external 12V DC power supply (1.3mm DC connector) must be used. This is available from Thermomax, (Pt no. A6249).

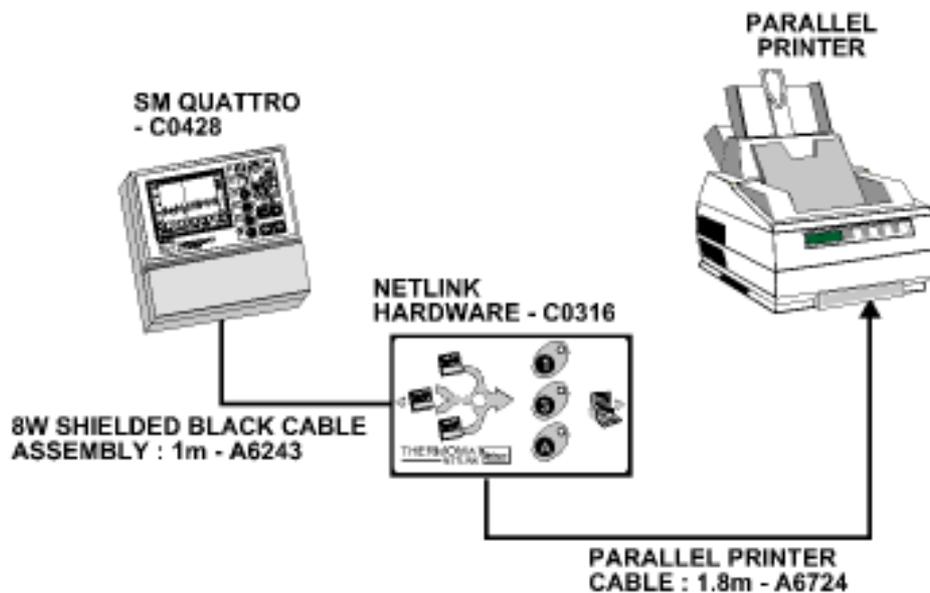
SECTION 1

CONNECTING THE NETLINK HARDWARE TO A PRINTER

1.1 Serial Printer



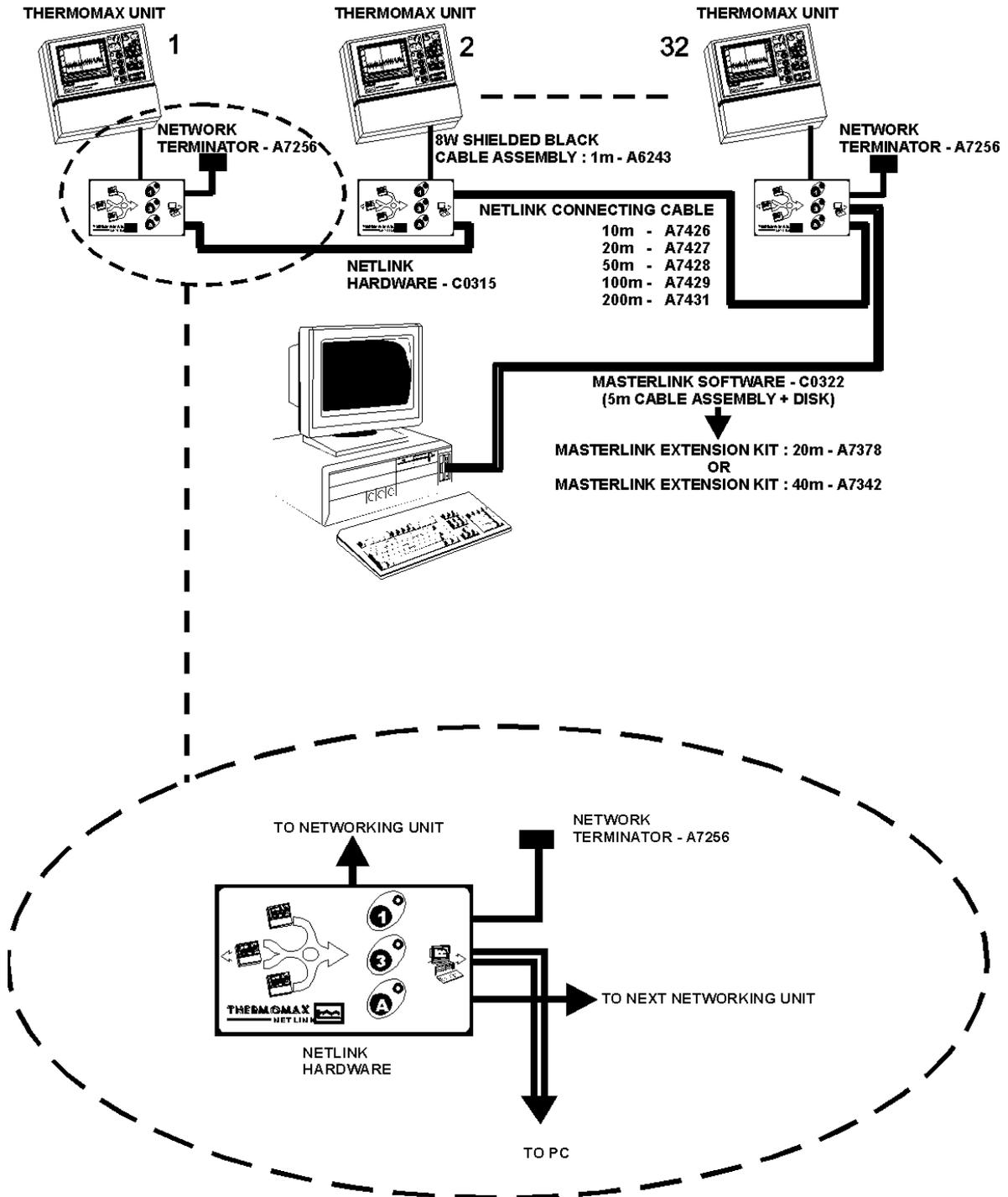
1.2 Parallel Printer



SECTION 2

NETWORKING A THERMOMAX UNIT USING THE NETLINK HARDWARE

2.1 Connecting Diagram



The PC may be connected to any Netlink Hardware unit.

2.2 Finding the Electronic Serial Number of any Thermomax Datalogging Unit

In order to connect any Thermomax Datalogging unit to the Thermomax Network, you must know the Electronic Serial Number of that unit. This is how the network addresses each individual unit. (See section 2.3 – Setting up a Thermomax Network using the Masterlink 3.1 Software).

For each standard unit, the diagnostic screen can be found in the following way.

Note: The user should start from the main screen and follow the steps below.

SM UNO / UNO M

1. Press the  key twice.
2. Use the   keys to move to the  window.
3. Press the  key to reveal the diagnostic screen.
4. The electronic serial number will be displayed at the top of this screen.

SM-UNO DIAGNOSTICS XX XX XX

SM QUATTRO

1. Press the  key twice.
2. Use the   keys to move to the  window.
3. Press the  key to reveal the diagnostic screen.
4. The electronic serial number will be displayed at the top of this screen.

SM QUATTRO DIAGNOSTICS XX XX XX

SMX 100

1. Press the  key three times to reveal the diagnostic screen.
2. The electronic serial number will be displayed at the top of this screen.

SMX 1.4 (CAL 31 JAN 98) XX XX XX

SM DUE / DUE DL

1. Press the  key twice.
2. Use the   keys to move to the  window.
3. Press the  key to reveal the diagnostic screen.
4. The electronic serial number will be displayed at the top of this screen.

SM-DUE DL DIAGNOSTICS XX XX XX

MDX 100

1. Press the  key twice to reveal the diagnostic screen.
2. The electronic serial number will be displayed at the top of this screen.

MDX 1.4 (CAL 31 JAN 98) XX XX XX

LCT 2

The LCT-2 STANDARD version, (C0450), requires the Netlink hardware module, but the LCT-2 NETWORK version, (C0422), does not as all networking capabilities are built into this unit. The LCT 2 's electronic serial number can be found as follows:

1. Press and hold the  key until the following message is displayed:

“DEUTSCH  FRANC  OR S TO CONTINUE”

2. Press the  key again.
3. Press and hold the  key until the following message is displayed:

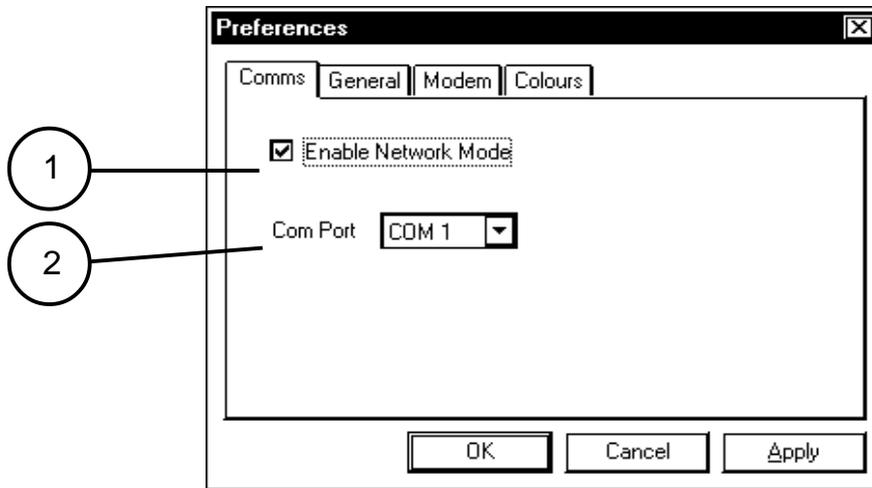
“LCT 2 XX XX XX”
“ VERSION 1.1 “

The Network option is available on the LCT-2, C0422, from serial number C0422DE10491, manufactured from March 1998.

The digit denoted by XX XX XX in all above represents the electronic serial number of each unit.

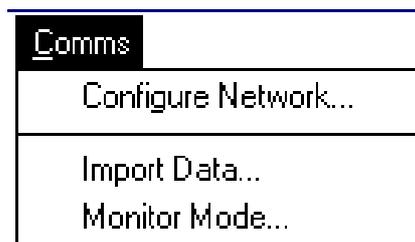
2.3 Setting Up a Thermomax Network Using the Masterlink Software

To enable the Network Option of the software, click on the “Options” menu, select “Preferences” from this menu and the following window will appear.



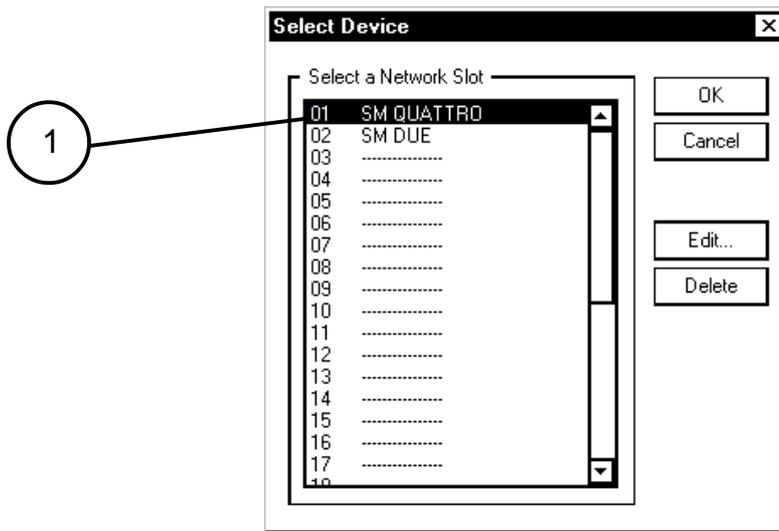
- 1 To enable the Network, click the selection box ① above. A ✓ indicates that the Network option has been selected.
- 2 The PC COM port is selected by clicking the ▾ key. You may then select COM 1 to COM 4. This should correspond to the COM port, which is connected to the Masterlink cable.

When the Network option is selected, the user may now access the “Configure Network” option from the “Comms” menu.

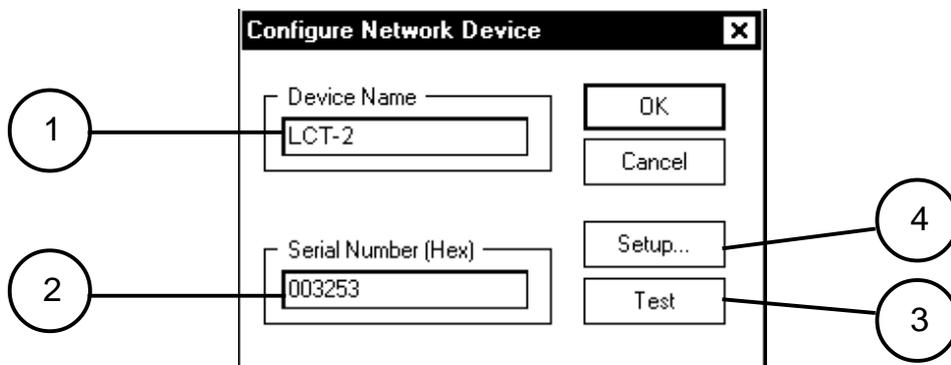


Here the user has the option to add new units to the network and then ‘set-up’ all the parameters for each unit. This option can also be used to modify existing units on the network.

There are 32 Network slots. You can “set-up” “edit” or delete any one of these 32 possible units by selecting the number as highlighted by ① below.



The Delete key will remove a unit from the Network. By clicking the “edit” key, the following window will appear:



- 1 Here the user has the opportunity to enter a name for the unit.
- 2 Here the user must enter the electronic Serial number for the network unit. The electronic serial number can be obtained in section 2.2 – Finding the Electronic Serial Number of any Thermomax Datalogging Unit. This will also be printed on the Calibration certificate of each LCT-2 unit.

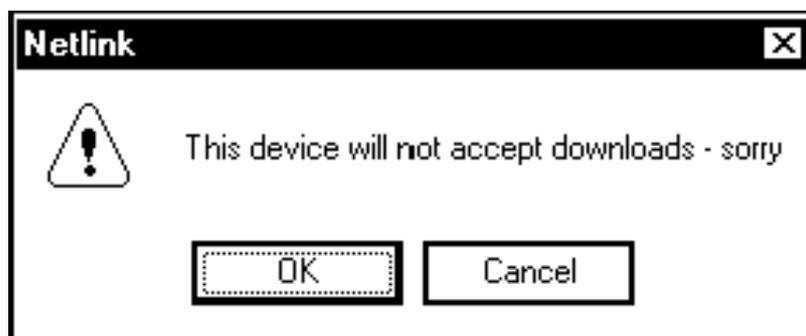
3. The “Test” key will communicate with the unit to ensure that all cables are connected correctly and the entered electronic serial is valid. If this is the case the following message is displayed:



If a cable is incorrectly connected or an invalid electronic serial number has been entered the following message is displayed.



4. The “Set-up” key can only be used in conjunction with the LCT-2 unit. This key allows the user to program all the LCT-2 parameters such as alarm values, time and date from a P.C. Should this operation be attempted on any other Thermomax device the following error message is displayed.



SECTION 3

SETTING UP & PRINTING WITH THE NETLINK HARDWARE

3.1 Netlink Print Control Functions.

Each key on the Netlink hardware module has two separate functions. This section describes the control features of the unit.

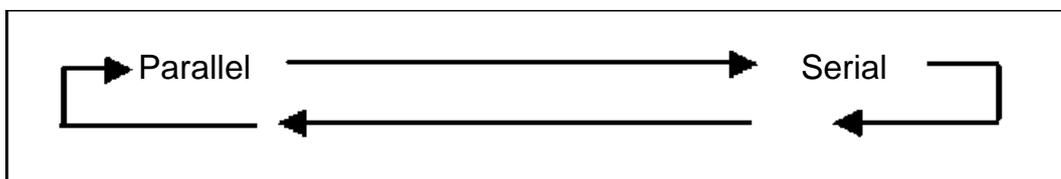
3.2 Changing the Printer between Parallel and Serial Mode

The Netlink Hardware module supports standard parallel and serial printer options. The factory default mode is set to the parallel printer option. The selected printer option may be checked as follows:

- 1 Power the unit up
- 2 The unit indicates the parallel printer option by flashing the green lamp associated with key ①, four times.
- 3 The unit indicates the serial printer option by flashing the green lamp associated with key ①, twice.
- 4 The Netlink Hardware will automatically print it's "SETUP" information to both parallel and serial printer outputs. This will detail the Software Version, Language Selection, Parallel or Serial Mode of Operation and Data type (temperature only or temperature + alarm). The user must now select a serial or parallel printer as detailed below:

The serial printer option is selected as follows:

- 1 Press and hold key ①. The green indicator associated with key ① should light for approximately 7 seconds.
- 2 Release key ① when the indicator lamp associated with it goes out. The printer option has now changed to serial mode.
- 3 To return to the parallel print mode option repeat points 1 and 2 above.



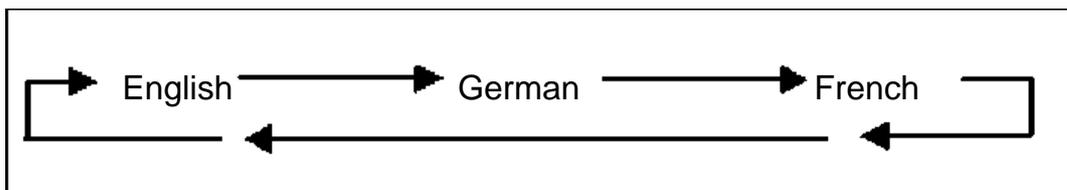
3.3 Language Selection

The Netlink hardware module allows for the data to be printed out in the following languages.

- 1 English
- 2 German
- 3 French

The desired language option may be selected as follows:

- 1 Press and hold key **3**. The green indicator associated with key **3** should light for approximately 7 seconds.
2. Release key **3** when the indicator lamp associated with it goes out. The language option has now changed as per the list. Step 1. Should be repeated to change the language to the next language on the list (English follows French).



3.4 Print “Temperature Data and Alarm Data” Option

The Netlink hardware module allows for the following printed options:

- 1 Temperature data only.
- 2 Temperature data and Alarm data.

Temperature data only is the factory selected default option. The desired data option may be selected as follows:

- 1 Press and hold key **A**. The green indicator associated with key **A** should light for approximately 7 seconds.
- 2 Release key **A** when the indicator lamp associated with it goes out. The “Print Data type” option has now changed to the “Temperature data and Alarm data” option.
- 3 To return to the “Print Temperature Data Only” option repeat points 1 and 2 above.

**NOTE: If the Humidity Option is used with an SM Quattro unit, the user must add 50 to the printed value.
E.g. If the printout shows a value of 1.5%RH, this equates to 51.5%RH.**

3.5 Current Netlink Status

The Netlink hardware module also allows for its current status to be printed. The following information is contained in the status report:

1. Software Version
2. Printer Type (Parallel or Serial)
3. Language (English, German or French)
4. Data Type (Temperature Only or Temperature + Alarm)

A status report is obtained as follows:

- 1 Press and hold keys ① and ③. The green indicator associated with keys ① and ③ should light for approximately 7 seconds.
- 2 Release keys ① and ③ when the indicators associated with both lamps go out. The Netlink hardware module will now print a status report.

3.6 Print Functions

After Selecting the desired printer options i.e.-Printer type, Language and Data type as described above, the Netlink hardware module can be used to print data directly from any Thermomax data logging unit. The following options are available:

- 1 Print one day's data (Key ①).
- 2 Print three day's data (Key ③).
- 3 Print all day's data (Key A).

To achieve any of the above print cycles the desired key should be momentarily pressed. The appropriate indicator lamp should blink and a print cycle is instigated on the attached printer.

SECTION 4 SPECIFICATION

DIMENSIONS	Width: 146mm
	Height: 29mm
	Depth: 94mm
	Weight: 0.17kg
Box material:	Plastic
Front Panel:	Reverse Printed
Display:	LED Display
Ambient Temperature:	0°C - 40°C

PARTS LIST

NETLINK HARDWARE (UK)	C0315
NETLINK HARDWARE (STANDARD)	C0316

ACCESSORIES

SERIAL PRINTER LEAD (BLACK)	A7433
SERIAL PRINTER	A6747
PARALLEL PRINTER LEAD (GREY)	A6724
NETLINK SWITCH BOX	A6113
SWITCH BOX CABLE ASSEMBLY (IVORY)	A7000
NETLINK CONNECTING CABLE : 1m (IVORY)	A7004
NETLINK CONNECTING CABLE : 10m (IVORY)	A7426
NETLINK CONNECTING CABLE : 20m (IVORY)	A7427
NETLINK CONNECTING CABLE : 50m (IVORY)	A7428
NETLINK CONNECTING CABLE : 100m (IVORY)	A7429
NETLINK CONNECTING CABLE : 200m (IVORY)	A7431
8W SHIELDED CABLE ASSEMBLY : 1m (BLACK)	A6243
8W SHIELDED CABLE ASSEMBLY : 10m (BLACK)	A6743
8W SHIELDED CABLE ASSEMBLY : 20m (BLACK)	A6244
8W SHIELDED CABLE ASSEMBLY : 40m (BLACK)	A6246
MASTERLINK SOFTWARE VERSION 3.1	C0322
MASTERLINK EXTENSION KIT : 20m (IVORY)	A7378
MASTERLINK EXTENSION KIT : 40m (IVORY)	A7342
12V REGULATED DC POWER SUPPLY	A6249
MAINS CHARGER	A6821



This product has been tested to the EU EMC 89/336/EEC directive according to the manufacturer's report, which is available on request.

Thermomax certifies that this datalogger has been manufactured to an ISO 9002 Quality System.

Thermomax undertakes to repair or replace the device if same is shown to be defective in its manufacture and/or components but Thermomax shall not be responsible for any other financial or economic loss (or any indirect loss) which may be incurred by the buyer/customer or others in the use of the device.

Any claim for repair or replacement must be made not later than 15 months after the date of manufacture.