WINCOR NIXDORF

BEETLE /iSCAN Tower Line 50

Self Checkout System

User Manual (December 2012)

**We would like to know
your opinion on this publication.**

Please send us a copy of this page
if you have any constructive criticism on:
- the contents
- the layout
- the product.

We would like to thank you in advance
for your comments.
With kind regards,

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_____

Your opinion

Contents

Introduction

The BEETLE /iSCAN Tower Line 50 is a terminal that offers a customer to handle the purchase by scanning, bagging and paying the items on his own. In case of problems an attendant is available for quick support.

BEETLE /iSCAN Tower Line 50 offers the following main functions:

- Record function - records items, the customer wants to buy

- Control function - secures the recording of all items

- Payment function - payment may be effected by banking cards, customer cards and accounts.

About this Manual

	i	This symbol is used to mark important information in this manual.

⚠	Text following this symbol should be given special attention in order to avoid damage and injury.

Important Notes

Appliances supplied by Wincor Nixdorf International GmbH comply with the respective safety regulations for data-processing installations and information technology installations, including electrical office equipment for use within an office environment.

⚠ Whenever work of any kind is done on the device, as well as when data cables are plugged and unplugged, the device must be completely disconnected from the line voltage.

- Keep this manual safe and at hand for ready reference.

- Appliances may only be repaired by authorized technicians.

- Unauthorized opening of the housing or inexpert repairs can result not only in considerable
  personal danger, but will also invalidate your warranty and liability protection.

- Always consult the enclosed documentation before doing any work with this appliance.

- If this device is brought from a cold environment into a heated place of business, condensation may occur. Before operation, the device must be completely dry. Therefore, an acclimatization period of at least two hours must be adhered to.

- Always lay the supply leads and cables in such a way that they cannot be stepped on or tripped over.

- Only touch green marked handles and knobs for moving parts.

- Exchange damaged cables immediately.

- In order to completely disconnect the device from the power source, turn the device off and use the separator in the fuse box\building installation.

- Make sure that no objects (such as paper clips) can reach the interior of the device, since electrical shocks or short-circuits could result.

- To avoid overheating of the power supply unit. Ensure that the BEETLE /iSCAN Tower Line 50 receives adequate ventilation.

- During an electrical storm, data cables should not be plugged in or unplugged.

- Keep the device away from airstreams/ventilation, vibrations, dust, humidity and heat.

- Ensure that used parts are disposed of in *an environmentally friendly manner*.

- In case of an accident (such as a damaged housing, entry of liquids or foreign objects), switch the device off and use the separator to completely remove the device from power.

- BEETLE /iSCAN Tower Line 50 is the result of state-of-the-art technology. Therefore, please also ensure that the BEETLE /iSCAN Tower Line 50 is operated under modern

building and technical conditions in order to ensure flawless and efficient operation. The appliance and other information technology hardware should only be connected to electrical supply networks with a separate protective earth wire (PE). This type of electrical supply network is referred to as a TN-S network. Do not use PEN conductors. Also follow the recommendations set forth in DIN VDE 0100 Part 540, Appendix C2 as well as EN50174-2, §5.4.3., the National Electrical Code ANSI/NFPA 70-2005 and the Canadian Electrical Code, Part I, CSA C22.1-02.

- When working on the cutter of the printer, the device must be turned off.

- Always keep the ventilation slots free of obstruction to ensure adequate air circulation and avoid overheating.

- Transport the appliance only in its original packaging (to protect it against knocks and bumps).

- If a lithium battery is supplied with the appliance, ensure that the battery is replaced with an equivalent type. Otherwise there is danger of explosion! Lithium batteries may only be replaced with identical types or other types recommended by the manufacturer.

- Batteries must be disposed of according to local regulations on the disposal of special waste.

- **Connecting Peripherals**
  Use only shielded cables when connecting devices to the system to ensure compliance with international Rules and Regulations for radiated emission as well as to achieve a high immunity against external disturbances.

Note on Laser

The barcode readers contain a light-emitting diode (LED), classified according to LASER CLASS 1:

Laser
  Laser Class 1: IEC 60825-1:2007+A1+A2,
                 EN 60825-1:2007+A1+A2

CLASS 1 LASER PRODUCT
APPAREIL A LASER DE CLASSE 1
LASER KLASSE 1 PRODUKT
LASER CLASE 1 PRODUCTO

CAUTION: CLASS 2 LASER LIGHT WHEN OPEN. DO NOT STARE INTO THE BEAM. ATTENTION: RAYONNEMENT LASER CLASSE 2 LORS DE L'OUVERTURE. NE PAS REGARDER FIXEMENT DANS LE FAISCEAU. VORSICHT–KLASSE 2 LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NIICHT IN DEN STRAHL BLICKEN. CUIDADO: LUZ LASER CLASE 2 AL ABRIR, NO FIJAR LA VISTA EN EL RAYO. Warranty VOID if case opened. Contains no user serviceable components.

ESD (Electrostatic Sensitive Devices)

Assemblies containing electrostatic sensitive devices (ESD) *may* be labeled with this sticker.

When installing an assembly or drive, please follow the guidelines below, which apply to all electrostatic sensitive devices (ESD):

- Make sure you are not carrying a static charge before working with components marked as ESD by first touching a grounded object (such as a radiator from a hot water heating system).

- All tools and devices you use must be free from static charges.

- Always unplug the power cord before installing or removing any assemblies.

- Always handle assemblies by their edges.

- Never touch the terminal pins of the circuits on an assembly.

Installation and Startup

i	Be certain to follow the safety guidelines in chapter »Important Notes«.

Before turning on the system

Unpack the parts and make sure that every item at the packing list is included.

If you find

- shipping damage **or**
- discrepancies between the contents of the package and the packing list **or**
- defects,

please inform your vendor or Wincor Nixdorf International GmbH (WN) sales location immediately. Also provide the packing list and the packing list item and serial numbers for the effected unit.

Please find the Serial Number at the side or at the back of the housing.

i	For further information please read the "Important Notes, Site Preparation and Commissioning" manual.

Connecting the System

The delivered system is completely configured. There are just a few things to do, before starting up the BEETLE /iSCAN Tower Line 50.

Start up

The power supply system must be equipped with separately guided protective earth conductor (PE). This kind of electricity system is known as TN-S network. Do not use PEN conductors!

Ratings of BEETLE /iSCAN Tower Line 50:

220 V-240 V, 50-60 Hz, 2,9A

110 V-120 V; 50-60 Hz; 3,5A

Find the rating of your device on the type label (see arrow at the picture below).

⚠️   Caution! Check that the set nominal voltage of the appliance corresponds to the local mains voltage.

Power Connection and LAN Support

The BEETLE /iSCAN Tower Line 50 supports Ethernet 10/100 BASE-T local area network (LAN) communication protocol. The BEETLE /iSCAN Tower Line 50 terminal provides a female RJ-45 connection port for the LAN. A 6-foot LAN cable is provided with the system.

Unlock and open the front door of the BEETLE /iSCAN Tower Line 50.
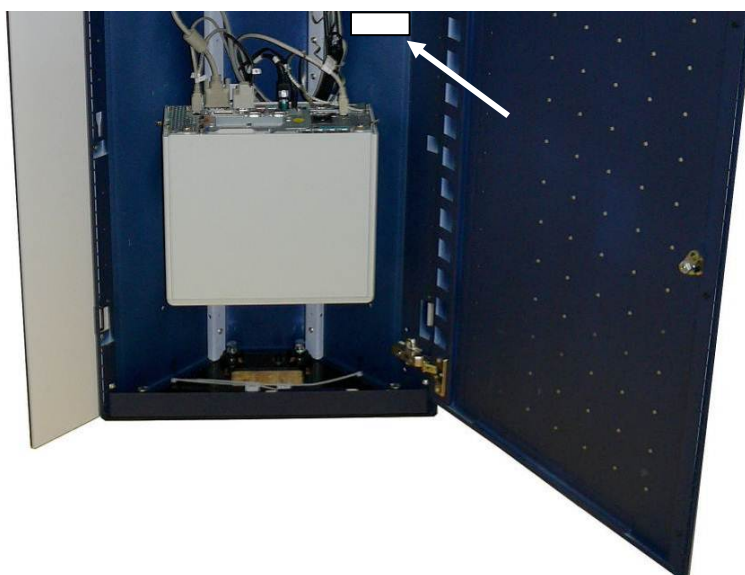
Guide the Power and the LAN cable through the hole (see arrow).
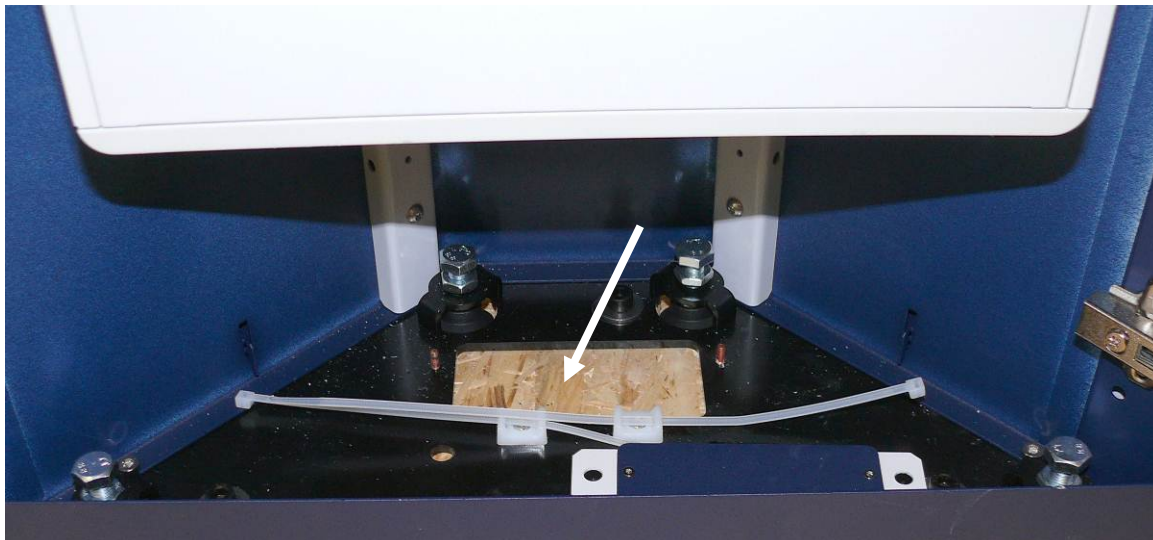
Plug the power cable at the BEETLE /M-II plus (see arrow) and the system will automatically start up. Plug also the LAN cable.

After starting up the system, you will see the start screen of the operating system at the display.
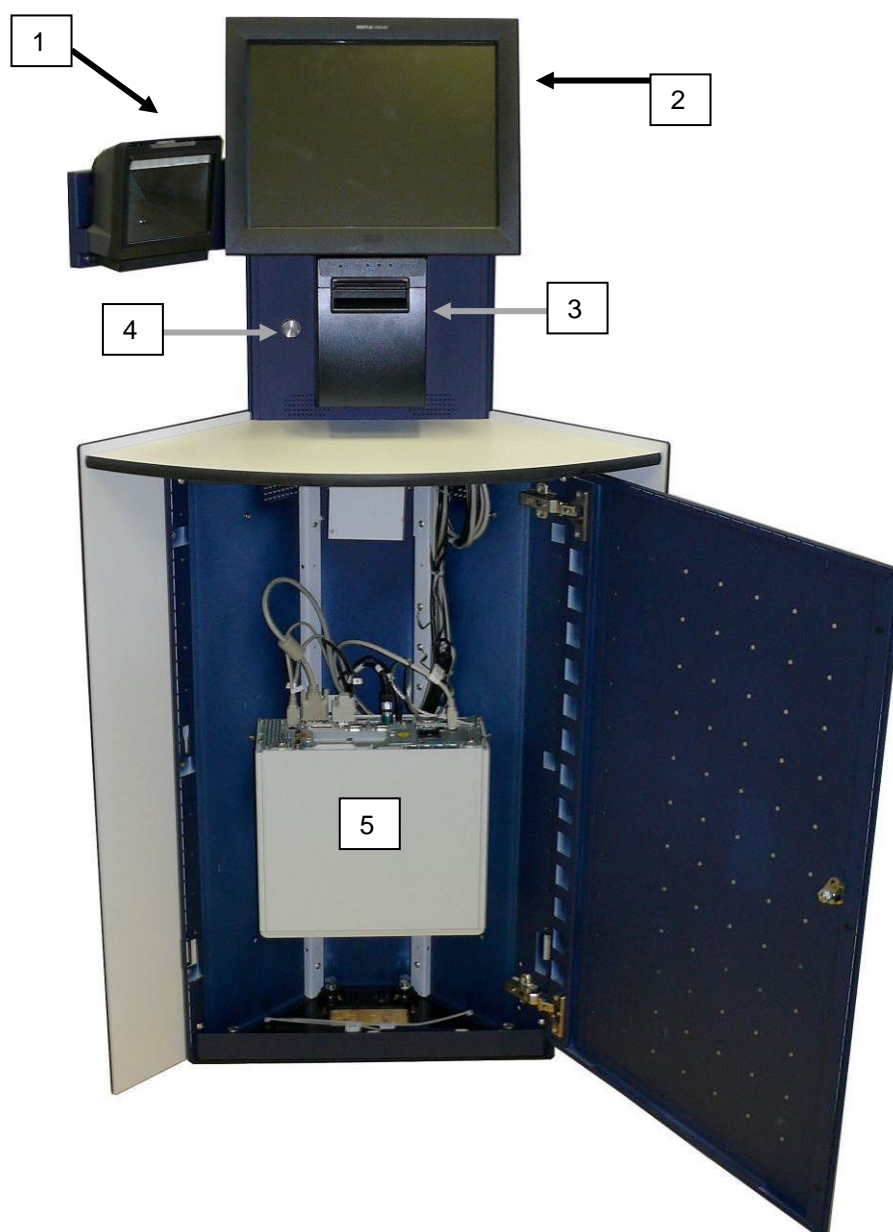
Disconnect the System from the Mains

At first **shut down the system** by the software application.

⚠ Caution! To separate the device completely from power supply unplug the power cable.

Components

1	Scanner	3	Printer	5	BEETLE /M-II plus
2	Screen	4	Attendant Lock		

Printer TH230+

Safety Instructions

Do not touch the cutter and tear bar of the printer.

The print head is a thermal element and it is at high temperature during printing or just after operation, therefore please do not touch it and its peripherals for safety reasons.

The thermal head is an ESD-sensitive device. To prevent damage, do not touch either its printing part or connecting parts.

Do not allow the printer to start printing when there is no recording paper installed, otherwise the print head and platen roller will be damaged.

To ensure quality print and normal lifetime, use recommended or good quality paper.

Shut down the printer when connecting or disconnecting interfaces connectors to avoid damage to the control board.

Set the print darkness to a lower grade as long as the print quality is acceptable. This will help to keep the print head durable.

Operate the printer only with power supplies and cables approved by Wincor Nixdorf.

Overview

The TH230+ is a powerful and low cost thermal printer for all kind of POS systems.

Printer cover

Paper output
Operator panel

On/Off Switch
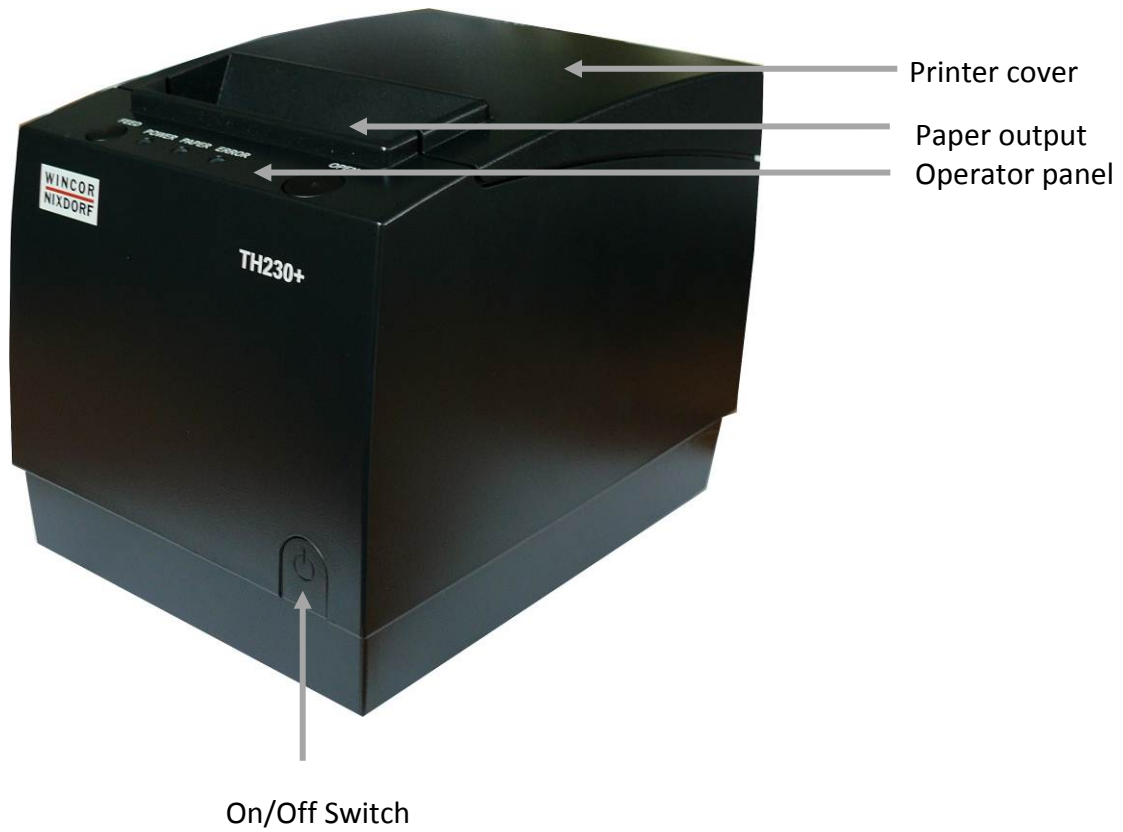
Operator Panel
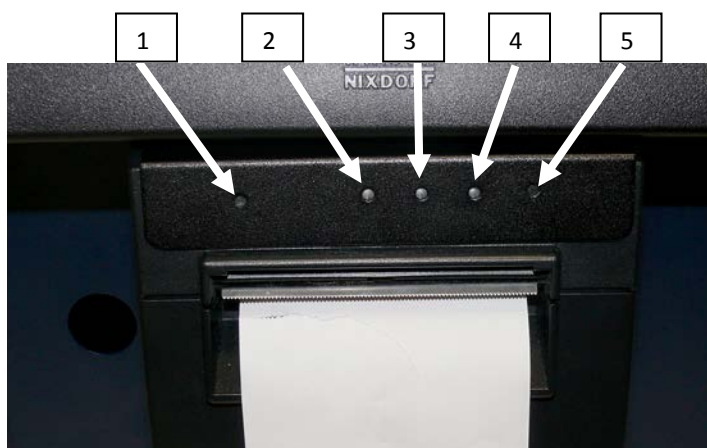
1 - OPEN

Press this button to unlock and open the cover. Thereby, the switch sheet flaps into an upright cover position

Switch Sheet ⟶

| i | If an error occured do not open the cover with force. |

Open the printer cover only if the cutter is in its home position. Otherwise the cutter or the cover may be damaged.

2 - Red ERROR LED

Red Error LED off: Normal condition

Red Error LED on: Not ready for operating. Printer cover is not closed or in
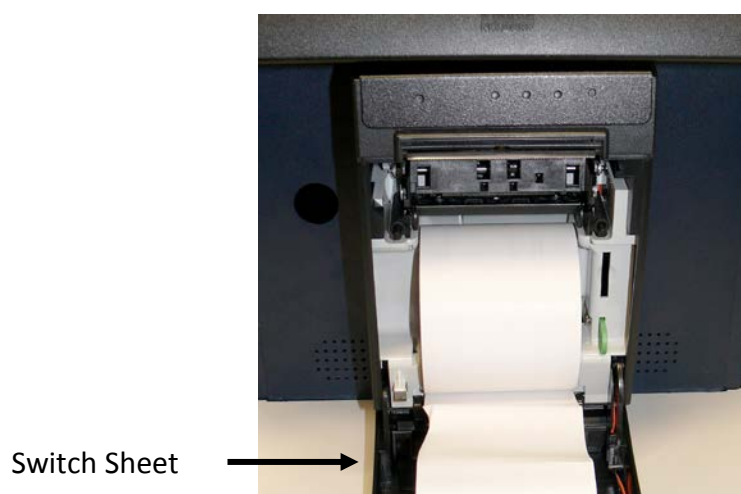   combination with Yellow PAPER LED on, paper end is reached

Red Error LED blinking: An error occured. Switch off the printer and on again. Contact
                                      your technical support if this does not work.

3 - Yellow PAPER LED

Yellow Paper LED off: Paper is properly inserted.

Yellow Paper LED on: Paper roll is near end.

Yellow Paper and red Error on: Paper end is reached.

4 - Green POWER LED

All LED off: Power is not stable

Green POWER LED on: Power is stable

Green POWER LED blinking: Printing speed may be low (*). If necessary contact your
                                          technical support

Green POWER LED flashes: Printer in idle mode

(*) The printer will run with the lowest power value (48W) if a non current power supply
unit from Wincor Nixdorf or an external power supply unit without automatic current
identification is used.

With a suitable power supply unit type the maximal power value can be defined with the
configuration menu from 48 Watt up to 90 Watt.

LED overview

	POWER green	PAPER yellow	ERROR red	Meaning
	off	off	off	No power
Operation	on			Power on
	blinking			If necessary call for technical support
	flashing			IDLE mode (power saving)
		off		Paper properly inserted
Paper		on		Paper near end
		on	on	Paper end
Error			blinking	If necessary, call for technical support
			on	Cover not closed

5 - FEED

If you push this button once and release it, the printer feeds paper for one line (1/6 inch).

If you push this button and hold it down, the printer feeds the paper as long as the button is not released.

The button can be locked by the application software and then will be without function.
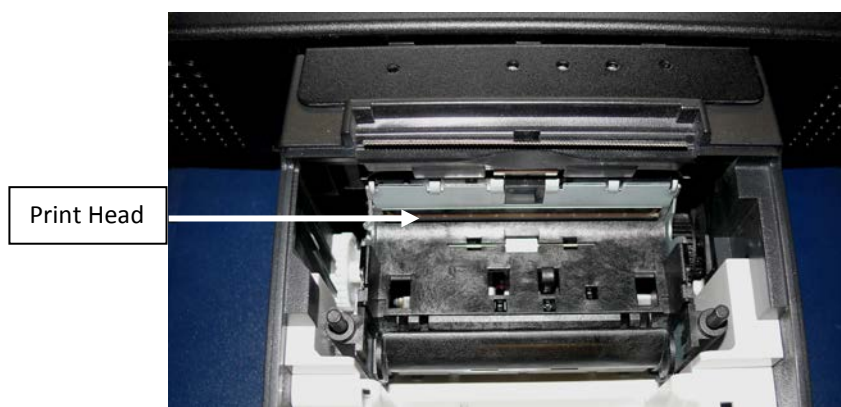
Print Head / Rubber Roller Cleaning
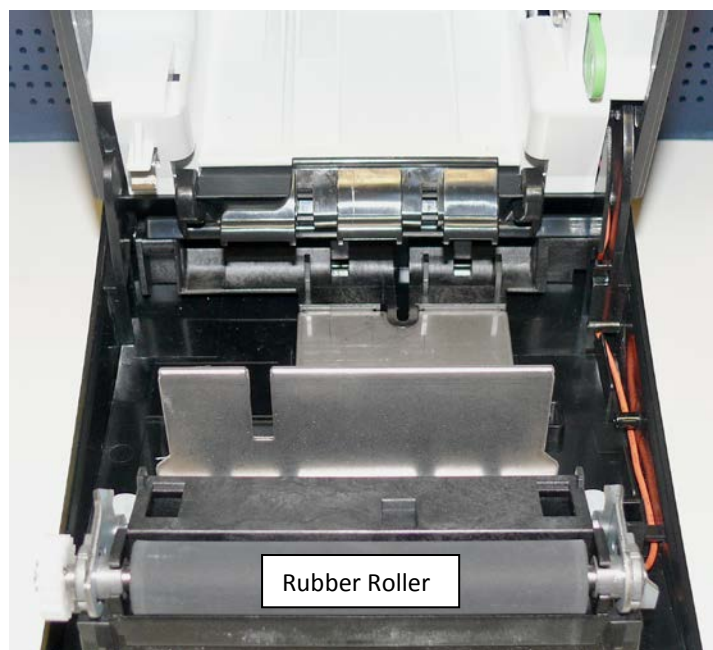
Clean the print head and the rubber roller at least every three months. In case of an intensive use of the printer clean both items more often to guarantee a stable print quality.

Open the printer cover and remove the paper-roll; the rubber roller and the print head mechanism are then visible.

⚠️ Let the print head cool down before cleaning it.

Rubber Roller

Print Head

Clean print head and rubber roller with a soft lint-free cloth moistened with pure Isopropyl alcohol (e.g. ISOPADS which can be ordered from Wincor Nixdorf).

Visually inspect the print head. If you can still see dirt, the cleaning procedure must be repeated. You can identify the relevant and important thermal element zone by the thin line crossed by wires.

Pay attention not to damage the paper end sensor when cleaning the print head.

⚠ Do not touch the rubber roll with your fingers.

While cleaning turn the rubber roller by hand with the lateral gear wheel make sure that the entire roller will be cleaned.

⚠ Cleaning the print head not properly may cause an early failure.
Wait until the isopropyl alcohol has evaporated.

Insert the (new) paper-roll and close the cover. Print out a test ticket (see application handbook) and verify the printing quality (density, alignment and consistency).
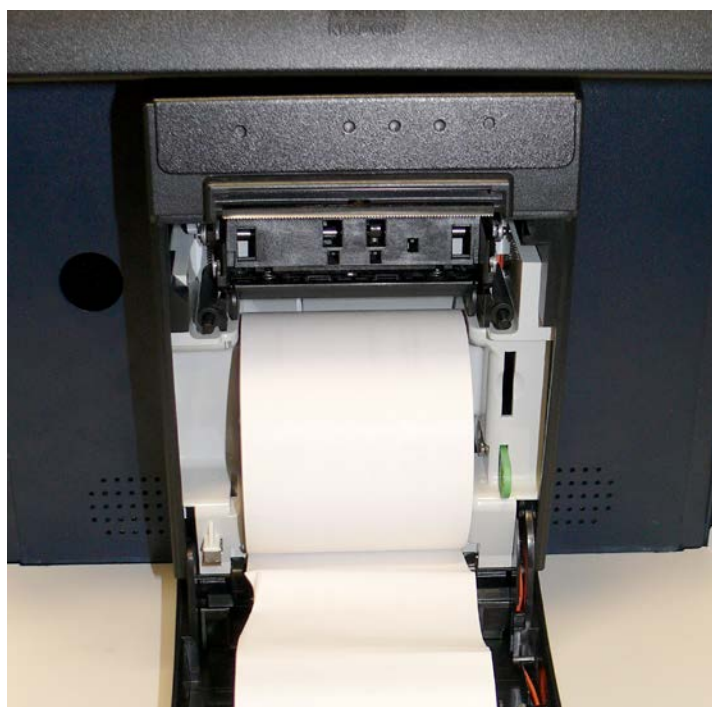
Paper Roll Exchange

For a paper roll exchange follow the steps below:

- Open the printer cover with a thin tool (1).

- Remove the (nearly) empty paper roll and any residual paper.

- If necessary clean the print head and the rubber roller.

- Unwind the outer layer (winding) of the paper roll.

Try to insert the paper roll.

Lay the unwinded paper over the front edge of the printer and close the printer cover. Press on the middle of the cover until it audibly and distinctly locks into place.

Tear off residual paper at the tear-off edge.

Paper Near End Sensor Adjustment

The paper end premonition is a control function. It allows to adjust a predefined amount of remaining paper on the roll.

The paper end premonition depends on the core diameter and the paper thickness of the paper roll in use.

You can adjust the remaining amount of paper yourself follow the steps below:

- Open the printer cover.

- Remove the paper roll.

- Loosen the locking screw at the inner wall of the printer for instance with the aid of a coin (do not remove the screw).
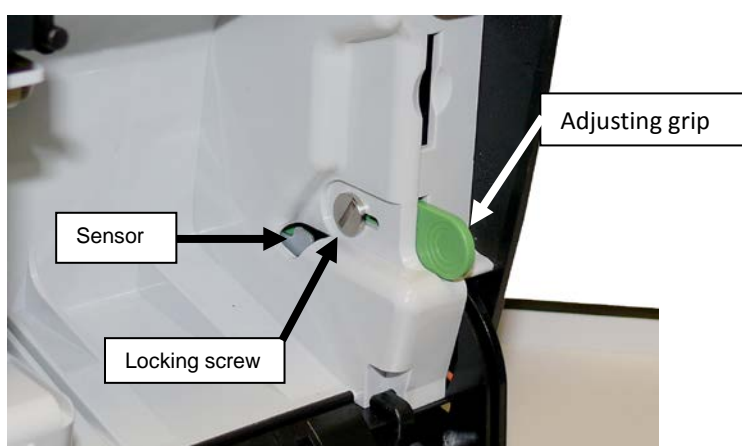
Move the adjusting grip to determine the remaining paper amount. A lower distance mark (adjustment grip downwards) will cause a lower amount of remaining paper and vice versa:
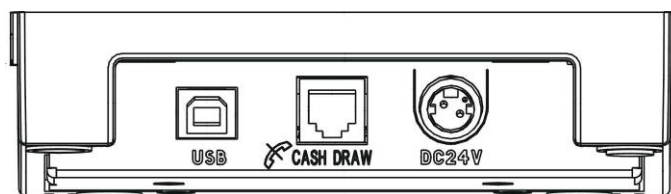
The scale reaches from 0.5mm to 12.5mm.

After determination of the distance mark:

- Tighten the locking screw

- Insert the paper roll

- Close the printer cover and lock it

Connector Variants

USB/CASH DRAW/DC24V

Energy-saving Mode

If the TH230+ is switched on but without a print job it stays in standby mode, which means, that all functions of the printer are powered with low voltage to be ready for operation.

In order to save more energy the printer changes into idle mode after an adjustable waiting time. Under idle condition the least amount of energy will be consumed. The mode will be indicated by flashing of the POWER LED.

If the printer receives print data it will change into full powered printing mode. Having done the print job the TH230 will turn to standby mode and then to idle mode again.

In the delivery status of the printer the function "idle mode" will be deactivated. The function and the according waiting time must be enabled in the configuration menu or via software.

Technical Data

|	
Technology	High-speed thermal print
Resolution	8 dots/mm (203 dpi)
Printing speed	One colour: 220 mm/s, Two colours: 110 mm/s TH230+ draft mode up to 300 mm/s (reduced density)
Cash Drawer Interface	6pin RJ12, 1A@24V max.
Interface Options	USB 2.0 full speed, PoweredUSB, RS232c, Ethernet
Cutter	Material: tempered steel Speed full cut: < 300ms
Paper Transport up to 12mm backwards	Forward; to use paper to full capacity after cutting: (approx. 3.5 lines at 7.52 lpi)
Control Functions	Print head temperature control with adjustment of Print speed Paper near end control and paper end control Paper cutter error message Printer cover open/closed Self test with printout
Option	Paper width 57,5mm, print width =51mm = 408 dot
Housing Colour	light grey or black
Power Supply	24 V DC Automatical and manual capacity control: 48 – 110 Watt
Dimensions	148 x 145 x 195mm (H x W x D)
Weight	approx. 2kg (w/o paper roll)
Features	Simple Paper roll exchange: Optional two colour print with special paper (100mm/sec) Paper near end message: adjustable by user

Statistical Data	Total number of dots
	Total line feeds
	Total number of cuts
	Max. head temperature
	Paper jam counter
	Cutter error counter
	Thermistor error counter
	High voltage/low voltage error counter
	Number of firmware updates
	Power on time in hours
	Power on counter

Reliability	TH230+
	70 Mio
	3 Mio
	150 km

Graphic Feature	TH230+ is fully graphic-compliant

Paper Specification

Paper width	79.5mm - 80mm
	optionally 57.0 - 57,5mm

Paper weight	55g/m² ± 5 g/m²

Paper thickness	0.055mm – 0.08mm

Thermo-Coat	Outside of paper roll

Paper roll outer diameter	90mm max.

Paper roll width	80.3 mm max.

Paper length	~100m

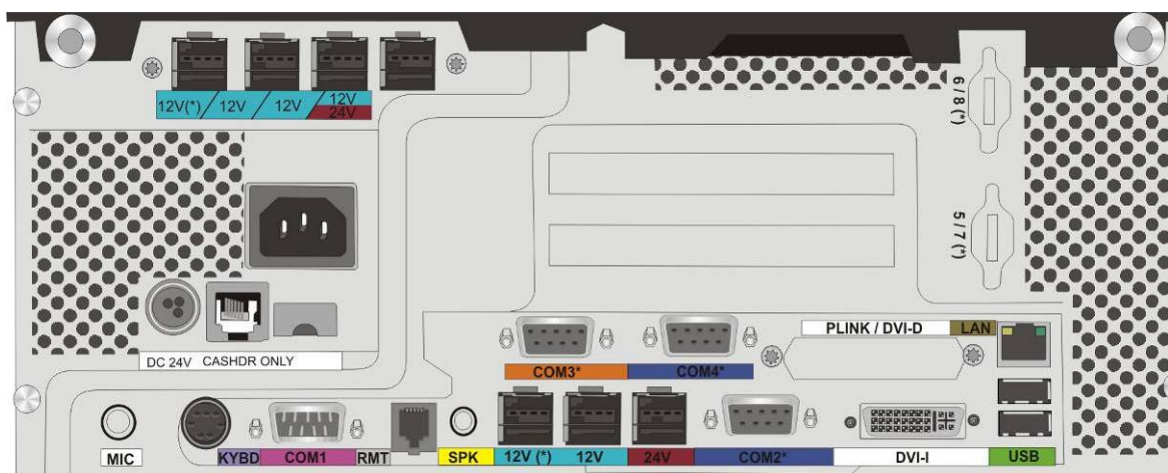| Core size	Core diameter: 10mm +2mm
	Wall thickness of the core: 2mm ± 0.3mm;
	Paper end not glued to core.
	Length of paper fold over at core: max 35mm

Print Area
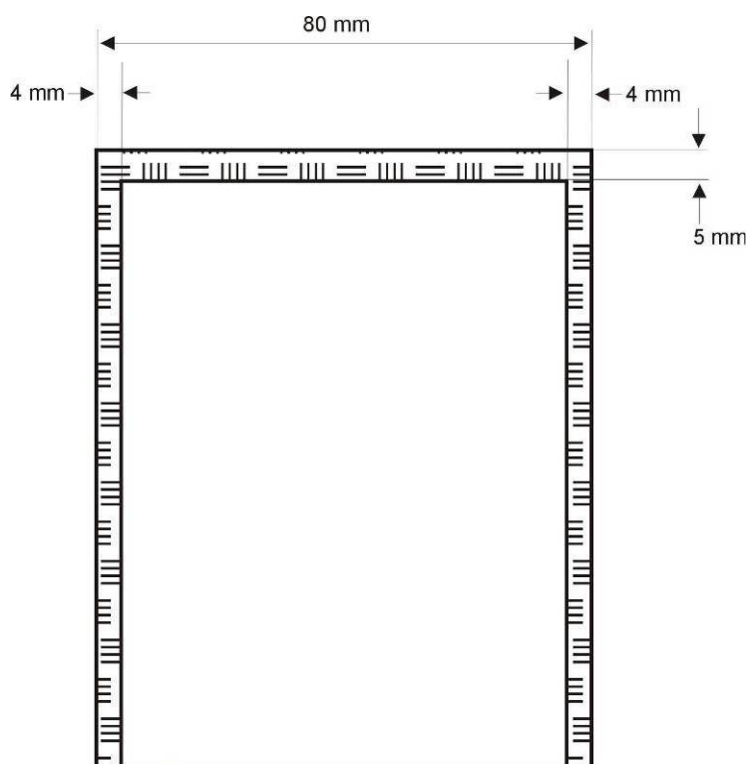
For optional paper width 57,5 mm,
print width =51mm = 408 dot

BEETLE /M-II plus

The BEETLE /M-II plus controls several devices in the BEETLE /iSCAN Tower Line 50, such as printer and scanner.

Interfaces BEETLE /M-II

| i | Find more information about BEETLE /M-II ...on the Wincor Nixdorf Internet. |

Scanner   25

Scanner Maintenance

Keep scanner windows clean. This will improve productivity and reduce rescans.

Scanning Items

To scan items, slide or push them through the scan zone. The scanner will work equally well with either a left-to-right or right-to-left motion through the scan zone.

Proper Scanning Technique

The scanner was designed to provide the ultimate in ergonomic enhancements for Point-Of-Sale (POS) scanning. To take advantage of these advancements.

Practice the techniques below to improve scanning efficiency:

- Move the product with the barcode side across the window.

- Develop efficient scanning motions, not necessarily faster hand movements.
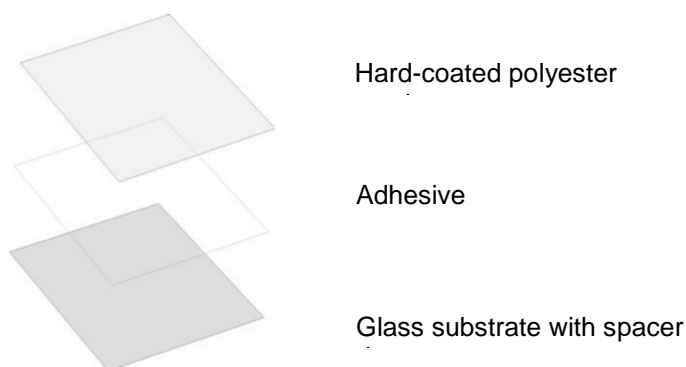
BA83 (with resistive Touch Screen)

General

The resistive TFT Touch Screen is constructed of a hard-coated polyester top sheet that is overlaid on a conductively coated glass layer.

Voltage is applied to the top sheet. As the user touches the screen, the top sheet compresses into contact with the glass layer, and current flows to the four corners in proportion to the distance from the edge. The controller then calculates the position of the finger or stylus, based on the current flow. Because the controller derives both the "X" and "Y" touch coordinates from the stable glass layer, the accuracy and operation of the touch screen is unaffected by damage to the top sheet caused by extended use or neglect.

Construction of the resistive Touch screen

Hard-coated polyester

Adhesive

Glass substrate with spacer

How to Operate

Touching the touch screen has the same effect as clicking the left mouse button. You only need to apply a little pressure with the fingertip. In this resistive process not only fingertip contact is recognized. The screen does react in any way if touched, for example, with a stylus. The recommended material for a stylus is polyacetal. The stylus should have a minimum spherical radius of 0.8 mm and contain no sharp edges or burrs that may cause damage to the top sheet.

Cleaning Instructions

Always turn off the system before cleaning. The surface of your Touch Screen should be cleaned with a water-based solvent or a non-abrasive cleaner. Do not use solvents containing acetic acid or methylene chloride. Use a soft, fine-meshed cloth to clean the surface. Dampen the cloth slightly and then clean the screen.

Appendix

Environmental Requirements

Operating conditions	
Ambient temperature:	5 °C – 35 °C
Humidity:	5% r.h. (1 g/m³) – 85% r.h. (25 g/m³)
Temperature change:	0.5 K/min (max. 7.5K/30 min)
Barometric pressure:	70 kPa – 106 kPa
(70kPa corresponds to an installation at approximately 3000 meters above sea level) Installation environments with long periods of sunshine should be avoided	
Storage conditions	
Ambient temperature:	5 °C – 40 °C
Humidity:	5% r.h. (1 g/m³) – 85% r.h. (25 g/m³) 0.5 K/min
Temperature change:	0.5 K/min (max. 7.5K/30 min)
Transport conditions	
Ambient temperature:	-25 °C – 60 °C
Humidity:	15% r.h. (1 g/m³) – 98% r.h. (32 g/m³)
Temperature change:	-25 °C / 25 °C

Cleaning Instructions

- Always **turn off the system** before cleaning.

- The glass surface of your Touch Screen should be cleaned with a mild, abrasive free, commercially available glass cleaning product.

- All pH neutral materials (pH 6 to 8) are good for cleaning. Cleaners with pH values 9 to 10 are not recommended. Cleaning with water and isopropyl alcohol is possible as well.

- Do **not use** solvents containing acetic acid.

- Use a soft, fine-meshed cloth to clean the surface. Dampen the cloth slightly and then clean the screen.

A wrong maintenance may cause damages to the screen, which are not covered by guarantee or warranty.

Maintenance and Service

When carrying out work on the components and modules that carry an electrical charge, this equipment must first be disconnected from the power supply.

Device Housing

Clean the housing with a vacuum cleaner or cloth.

Cleaning Materials: Order Numbers

The items listed below can be ordered from Wincor Nixdorf branch office or your Wincor Nixdorf sales partner.

Product Name	Order Number	Explanation
Cleaning set for EDP devices: 125ml plastic cleaner w/o alcohol 125ml TFT/LCD/screen cleaner 35 dust cloths 3 keyboard swabs for places difficult to reach 1 keyboard sponge	01750097335	For cleaning and maintaining keyboards and varnished and plastic-coated housings
Damp cleaning cloths Dispenser box with 100 cloths	01750097332	For cleaning and maintaining delicate EDP devices, keyboards and housings
Damp cleaning cloths Antistatic and fluff free Dispenser box 60 cloths	01750097334	For cleaning display panes
Compressed air spray PRESSAIR 400ml bottle w/o valve, 70cm hose	01750097331	Cleaned compressed air, CFC-free, for removing loose dust and dirt particles
Cloth with ISOPROPYL 1000 pieces	01750104065	Pure isopropyl alcohol for cleaning coin validators, displays etc.
Cleaning card	01750016388	For cleaning magnetic heads and chip contacts in ID card readers

Please note the **manufacturer's specifications** on the packaging and on the information sheet included in the packaging. The product may be damaged or soiled if materials are used that are not approved or if used improperly.

Certifications of the Manufacturer

This device complies with the requirements of EEC directive 2004/108/EEC with regard to "Electromagnetic Compatibility" and 2006/95/EEC, "Low Voltage Directive".

Therefore, you will find the CE mark on the device or on its packaging.

Important: Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC-Class A Declaration

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful inter-ference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Modifications not authorized by the manufacturer may void users authority to operate this device. This class A digital apparatus complies with Canadian ICES-003.

Cet appareil numerique de la classe A est conforme à la norme NMB-003 du Canada.

Recycling the BEETLE /iSCAN Tower Line 50
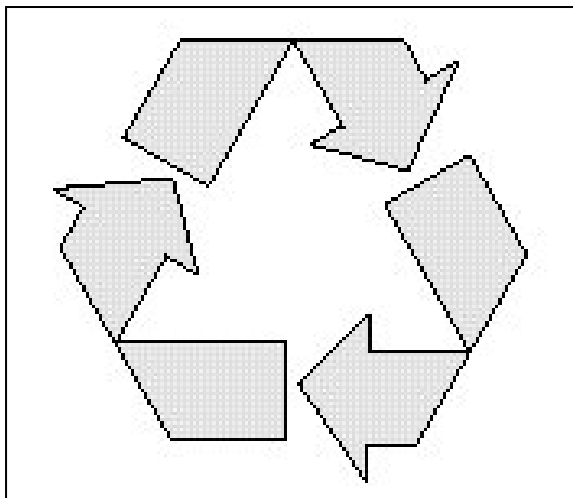
BEETLE /iSCAN Tower Line 50 was designed according to the Wincor Nixdorf standard "Environmentally Conscious Product Design and Development".

BEETLE /iSCAN Tower Line 50 is manufactured without the use of CFCs and CCHs and is manufactured to a great extent out of materials and components which are recyclable.

For recycling purposes do not attach any additional adhesive labels to the device.

Wincor Nixdorf disposes of old devices in an environmentally responsible manner at a recycling center that is ISO 9001 and ISO 14001 certified, as is the entire company.

Follow your local regulations on the disposal of toxic waste.

Your Wincor Nixdorf vendor will answer any questions you have concerning returns, recycling and disposal of our products.