

**WINCOR**  
**NIXDORF**



# TA85P- USB

POS Tastatur/ POS Keyboard

Benutzerhandbuch/  
User Guide

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Mit freundlichen Grüßen

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your opinion on this  
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We would like to thank you in advance for your comments.

With kind regards,

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# **TA85P- USB**

POS Keyboard

User Guide

Edition July 2012

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# Manufacturer's Declaration and Approval

## General Authorization



This device fulfills the requirements of the EU directives 2004/108/EU "Electromagnetic Compatibility" and 2006/95/EU "Low voltage".

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

## 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 interference 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 requested to correct the interference at his own expense.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la "Class A" prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

## USB Certification



The TA85P-USB has received the license to use the USB-IF Basic Speed Logo.



# User Information

Wincor Nixdorf International GmbH (WN) does not accept responsibility for radio and TV interference and faults that are caused by unauthorized changes that have been made to the devices. Furthermore, cables or other devices that have not been approved by WN may not be connected to the device. The user is responsible for any faults and interference that are caused as a result.



Repair work on the devices should only be carried out by authorized and specially trained personnel. Improper repairs will lead to the loss of any guarantee and liability claims.

# Safety Instructions

Note the following safety information:

- Lay all cables and supply lines so that nobody can tread on them or trip over them.
- Protect the device from dust, moisture and heat.
- Take care to ensure that no foreign objects (e.g. paper clips) or liquids can get into the inside of the device, as this could cause electrical shocks or short circuits.

# Cleaning Instructions



The keyboard should be cleaned with a germicide from time to time. Before cleaning in between the keys on the keyboard with a brush, loosen and remove the key caps using the key removing device. Make sure no moisture penetrates the spaces between keys. Do not allow dust to get in through the open keyboard mechanics.

## Warranty

Wincor Nixdorf guarantees generally a warranty engagement for 12 months beginning with the date of delivery resp. the date of acceptance. This warranty engagement covers all those damages which occur despite a normal use of the product.

Damages because of

- improper or insufficient maintenance,
- improper use of the product or unauthorized modifications of the product,
- inadequate location or surroundings

will not be covered by the warranty.

For details please consult your contract documents.

All parts of the product which are subject to wear and tear are not included in the warranty engagement.

Please order spare parts at the Wincor Nixdorf customer service.

## out this manual



Notes in the manual are marked by this symbol.

This symbol is used for warnings.

Separate manuals are included in the scope of the connectable peripherals. For this reason, a more detailed description of these devices will not be provided here. For more information see the relevant manuals.

### Scope of supply

The product includes one TA85P- USB keyboard, one user guide and one accessories kit containing the following:

- 1 \*triple "0" key cap
- 1 \* double "0" key cap
- 1 \* single "00" key cap
- 1 \* single "0" key cap
- 1 \* single "." key cap
- 2 \* quadruple variable keys
- 6 \* double variable keys
- 14 \* single variable keys
- 74 \* single transparent plates, 6 \* double, 2 \* quadruple
- Blank sheets for labelling
- 1 key cap remover
- 1 set of keys
- 1 diskette for programming the keyboard

The set of keys contains:

Key 1 for key position 1

Key 2 for key positions 1 and 2

Key 3 for key positions 1, 2 and 3

Key 4 for key positions 1, 2, 3 and 4

The following items can be ordered optionally:

Accessories kit 1: 20 dummy keys (1 x 1)

Accessories kit 2: 6 double variable keys  
2 quadruple variable keys

Accessories kit 3: 12 single variable keys

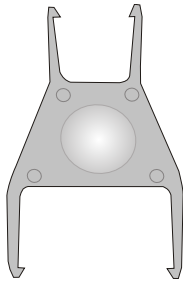
Depending on your order, the keyboard may have a swipe card reader.



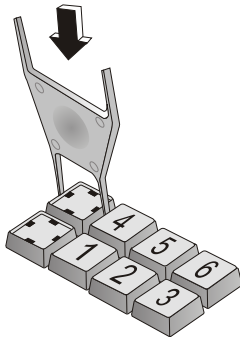
If damage has occurred during shipping or if the package contents do not match the delivery note, promptly notify your Wincor Nixdorf sales outlet.

# Mounting keys

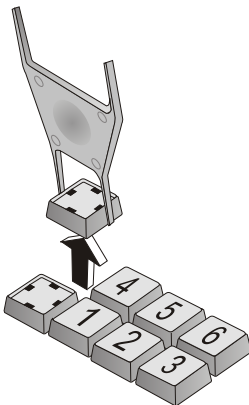
## Exchanging the Keys



You can remove each of the key caps using the key removal device enclosed, pulling the key upwards.

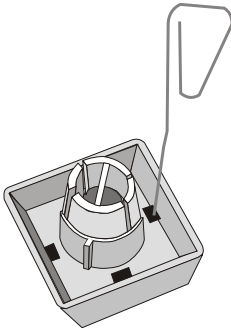


Place the key removal device on the selected key until you hear a click.



Now remove this key from the keyboard by pulling upwards.

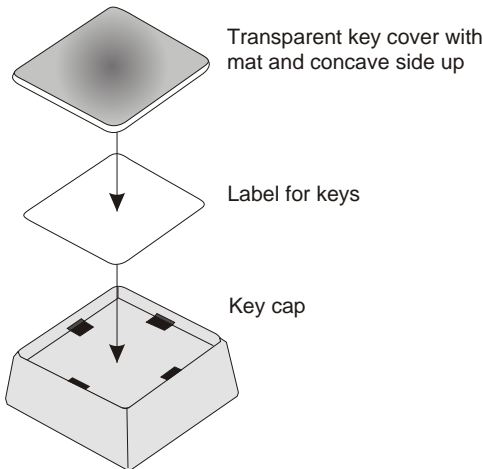
If the key that has been removed carries a number or character, you can change the lettering as follows:



Using a thin object (e.g. paper-clip etc.), press upwards against the plastic cover through the opening on the underside of the key. Please refer to the next chapter for instructions on how to insert the new label.

## Inserting Key Labels

Below, you will find instructions on how to insert the key labels:



Each key should be labelled individually. You can use the empty labels delivered with the system to do so.

Place the written label on the key cap.

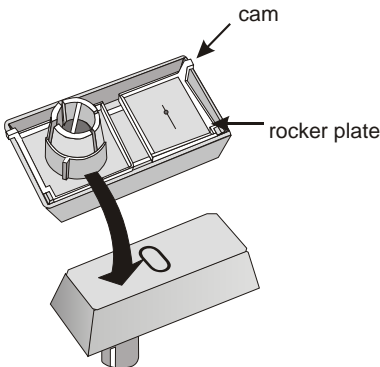
Insert the transparent key cover with the **mat** and **concave** side upwards until it clicks into place in the key cap.

The labels are replaced as follows:

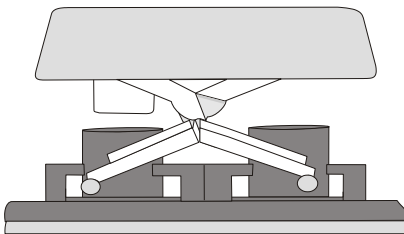
- Remove the key cap from the keyboard (see removing the key cap) and pull the transparent key cap upwards.
- The transparent key cover is then released and the label can be removed.
- Replace the label and fit the transparent key cover (with the mat and concave side facing upwards) back into the key cap.

## Inserting Key Caps

Insert the key cap in the keyboard and press firmly into place.



When inserting double or triple keys, please ensure that the guide cylinder is on the left in horizontal resp. on top in vertical position. The quadruple key caps are corresponding -with the guide cylinder arranged on the upper left position.



quadruple key cap with scissors

Ensure when inserting the key caps that the white cam of the rocker plate is in the planned bulge of the keyboard.

If you hear a click, the key caps are inserted correctly.

# The TA85P-USB keyboard

## General

The free-programmable version TA85P- USB have a keypad with maximum 84 usable keys. Except for the numeric keys (0 to 9), the “C” key and the “,” key, the key layout is flexible, i.e. any two contiguous keys can be combined to form a double key and any four keys can be combined to form a quadruple key, either horizontally or vertically.

The TA85P-USB keyboard is equipped with a key switch with 6 switch positions and is available with or without a swipecard reader.

A power-up reset and an automatic self-test are performed each time the POS terminal is switched on. Following these self-tests, the keyboard is ready for operation. The keyboard receives its power from the POS system.



TA85P-USB keyboard

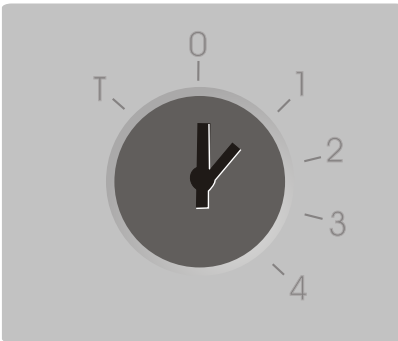
## Keypad

In the TA85/TA85P- USB keypad, two keys can be combined to form a double key and four keys to form a quadruple key, either horizontally or vertically. Only one key code is generated by each double, triple or quadruple key.

Key caps can be changed on the spot using the key cap remover included in the scope of supply. When using the key caps for multiple keys, note the position of the pin on the underside, making sure that the desired code is set. According to the Wincor Nixdorf Convention the guide cylinder is positioned left (double or triple key horizontal), on the bottom (double key vertical) or on the bottom left (quadruple key).

## Key switch

The TA85P- USB keyboard is equipped with a key switch with 6 switch positions. Switch position 0 is the basic position; switch positions 1-4 are provided for customer-specific applications. In positions 0 and 1, the key can be removed.



The sixth switch position, which is designated on the lock by T, is intended for use by Field Engineering. From switch position 0, the key provided can be turned to position T only. This key is not included in the scope of supply.



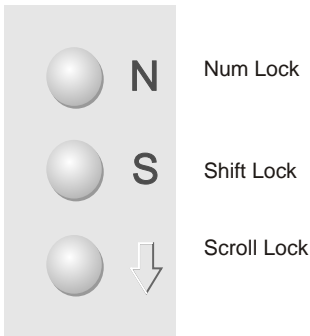
## LED



The key switch has only one closure, i.e. there is only one set of keys for all keylocks that includes the above-mentioned key variants for the various switch positions.

## LED

The TA85/TA85P- USB has 3 LEDs:



They are activated or de-activated by the application software. Normally, this follows an according keystroke. MS-Windows allows the LED Numlock to be activated/deactivated via software.

### Num Lock

When the LED Num Lock lights up the numerical keypad is active (figures, decimal point and comma) and not the basic level (cursor, "delete" etc.). You can switch between these levels with the NUM key (also on a programmed second keyboard connected to the system) or via software, depending on the operating system. In non-programmed state the keyboard will activate the NUM Lock state independently, as long as keys of the numeric block are pressed and when the NUM Lock state has been switched off before.

This procedure is to make sure that at any case the keys of the numeric block are reproduced as such by the system (e.g. digits instead of arrow or cursor).

### **Shift Lock**

When the use of capital letters is activated, this LED lights up. All letters will normally be used as CAPS. In non-programmed state the keyboard will switch off the Shift-Lock state independently, as long as keys of the alpha-numeric block are pressed and when the Shift-Lock state has been switched on before.

### **Scroll Lock**

Scrolling is inactive, when this LED lights up. The scrolling function is only used by few software programs.

## Swipecard reader (SCR)

The TA85/TA85P- USB is optionally equipped with a swipecard reader.

### Using the Swipecard reader

Pull the magnetic card evenly and quickly, from top to bottom, through the slot on the swipecard reader. Make sure that the magnetic stripe is not facing the keys.

Note the following precautions when handling magnetic cards:

- Never allow magnetic cards to come into contact with liquids.
- Never bend or fold magnetic cards.
- Never expose magnetic cards to a magnetic field.



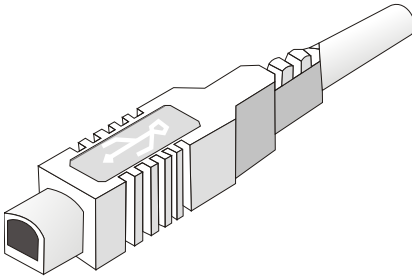
Insert the magnetic card in the special slot provided on the reader from the right-hand side only; inserting the card at another location could damage the read heads.

## SELF-TEST

### Cleaning Instructions

In order to ensure that the quality of reading results is maintained, clean the swipecard reader at least once a week. To do this, use the special cleaning card that can be ordered from Wincor Nixdorf.

### Connection method



The connector for the keyboard is a standard USB-B connector.

The cable can be ordered optionally in different lengths.



Make sure that no extension cable or USB adapter plug are connected. The function can be disturbed.



Never remove a cable from a connector socket by simply pulling on the cable. Always remove the cable by the connector housing.

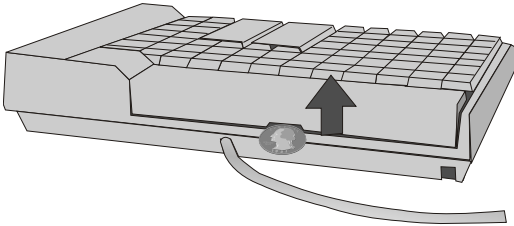
### Self-test

A self-test of the keyboard is performed each time the POS terminal is switched on. During this test, the interface to the system is disabled. The system is informed of the successful completion of the test.

The USB login (enumeration) is in progress.

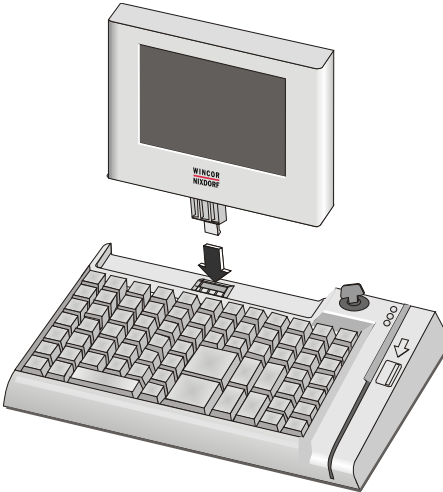
# Mounting the BA69

Turn round the keyboard.



There is a gap in the top, which is stuck on the keyboard.

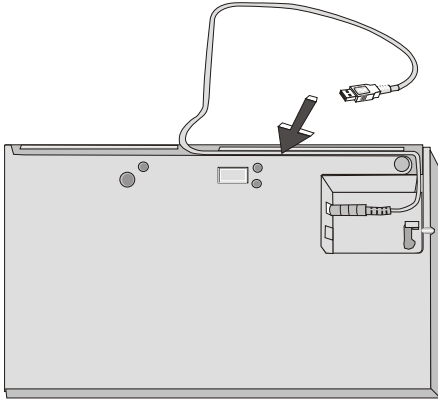
Lift up the top with a coin.



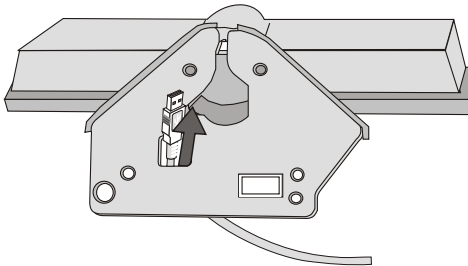
Connect the cashier display into the keyboard.

## Mounting the BA63/BA66

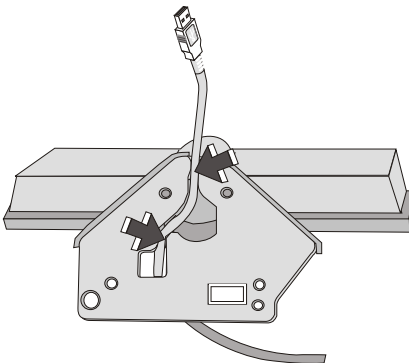
Before installing, make sure that the mains supply has been pulled out.



Clip the keyboard cable that is connected to a BEETLE or a PC into the rail at the backside of the keyboard.



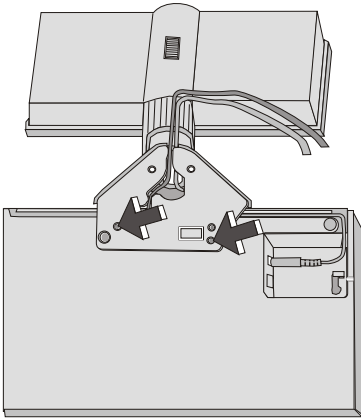
Put the keyboard cable through the opening of the foot of the BA63/BA66 (see picture).



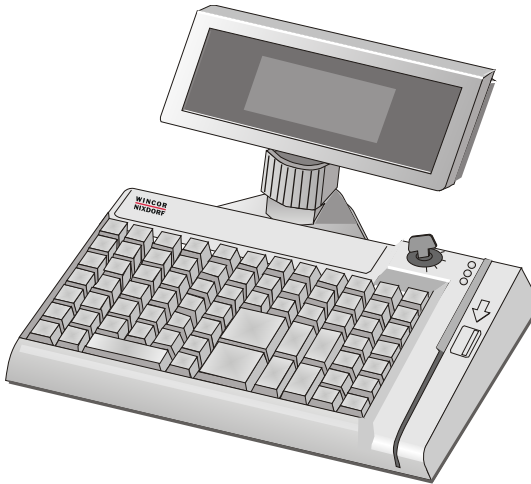
Then press the cable at the positions (see picture) into the guidance so that it “disappears”.

## MOUNTING THE BA63/BA66

Fasten the BA63/BA66 with the two screws at the keyboard (see arrows).



Connect the keyboard cable and the screen cable to your BEETLE system and then switch on the power.



# Programming the TA85P- USB

By programming the TA85P- USB you have the possibility to flexibly adjust the keyboard to your special needs.

You can

- design the keyboard layout according to your needs by - for example - moving the numeric block to any place on the keyboard,
- define several levels for the keycodes, thus using the same key as a functional key on one level and for text input on another level,
- port your existing software application with less effort, as you can keep up the key codes.

Programming the keyboard TA85P- USB is described in detail in the Readme file.

## Modes

The codes of the keyboard are always transmitted as so called HID reports. Normally, the additional devices of the keyboard transmit their data via an HID interface of their own. Nevertheless, they also can transmit their data as HID reports via the keyboard interface.

Internally Windows handles the HID reports of the keyboard interface as if the corresponding keys of a PS/2 keyboard would have been hit. So, if you have connected a PS/2- or one or even two USB keyboards, a software application can not distinguish which keyboard is being used. Therefore, this can not be used as a multiple-station system!

The modes in detail:

“Not programmed” This is the default mode of the keyboard. Keys send default codes, additional devices send their data via their own HID interface, if this was switched on by an “enable”-command.

“Programmed” In this case a table has been sent to the keyboard and was stored in the Flash PROM. The table actuates the generation of key codes. Optionally, it can also actuate the code generation for the additional devices.

**Additional devices** can operate in two different modes:

“Default mode” Additional devices send their data via their own interface. Prerequisite for data supply is that it is switched on by the enable command via their own interface.

“Legacy mode” Additional devices send their data as HID reports via the keyboard interface. This resembles a Windows protocol for a PS/2 keyboard. An “enable” is not necessary for this. An “enable/disable” can be executed via interface of the additional device.

## Main Functions

The utility KbUtiUSB is a program written with JAVA and therefore can be run under Windows and WNLPOS (a Linux distribution of Wincor Nixdorf).

The dialogue utility KBUTI.EXE serves to:

- programming the codes for the keys and the components key lock, swipe card reader
- send a keyboard table to the keyboard
- receive a table from the keyboard and to store it in a file
- reset a keyboard into its default state, i.e. Windows Mode and default codes for the keys
- check for keyboard state (default or programmed).



# Firmware- Update

There is an own utility (WNUpdHID.exe under windows), which is also used for other devices with USB HID interface.

In case of a firmware update the programmable functions (keyboard tables etc.) are confirmed.

## Keyboard Connection

To program a TA85P- USB keyboard connect this directly to the BEETLE system (or a PC with USB connector). Another PC keyboard (PS-2 or USB) can be connected directly to the BEETLE system.

But please make sure that only one (not two) TA85-P- USB keyboard is connected to the system! Otherwise the system can not clearly distinguish which keyboard is used for programming.

## Creating Tables

Using the utility KbUtiUSB requires a Java runtime system version 1.4.2\_06 at least. So you will at least need Windows 2000 or Windows XP, as Windows NT does not support USB. For the Linux operating system you will need WNLPOS.

The creating of tables demands additionally a mouse.

It is possible to define up to 4 keyboard levels. They may be dependent on

- freely defined level keys (POS Shift levels)
- Ctrl, Alt, AltGr state

You can define simple codes, codes in Shift state, key combinations strings built from that like e.g.:

a  
A  
\*  
00

{Ctrl+F5}  
{Shift+F8}  
{Alt+F1}  
{Alt+#123}  
{Ctrl+f}{Alt+#240}

Before programming the following is to be defined:

- Target keyboard TA85P- USB (can not be changed later)
- Keyboard language, e.g. US for USA, GR for Germany etc.
- Type of level selection (none, POS Shift, Ctrl/Alt/AltGr, CapsLock/Scroll-Lock)

Specification of the keyboard language is required to allow the virtual keyboard to deliver such codes, that can be interpreted later correctly by the language keyboard driver for the resp. country. The target configuration is important, not the configuration at the time when the table is created.

For the codes of the key lock and the data of the various tracks of the magnetic stripe reader, header and trailer codes can be programmed. This allows the application to distinguish those from normal key strokes.

The codes assigned can be viewed key by key (also with Autoincrement) with the help of KBUTI.EXE. They also can be shown in a more compact form on the screen or for documentation purposes can be written into a file with extension .TXT or directly be sent to a printer (LPT1).

## Sending and Receiving Tables

The codes assigned are stored in a file with default extension .kbu. Such files can be loaded by the dialogue utility KbUtiUSB.EXE and the tables sent to the keyboard. Accordingly KbUTIUSB.EXE may receive a table from the TA85P- USB, which then can be viewed or stored in a .kbu file.

By certain parameters you can configure KbUtiUSB in a way, that

- sending a table from a file to the keyboard
- receiving a table from the keyboard and writing into a file

can run silently.

## USEFUL HINTS

Additional parameters allow a further control of the keyboard (Vendor ID / Product ID) so that clear arrangements can be made in case there are more than one keyboard with USB interface from Wincor Nixdorf. There must not two keyboards of the same type (e.g. two TA85P-USB keyboards) being connected to the system!

## Useful hints

Programming keyboards by tables allows a very flexible keyboard layout. However, one should have some thought about the task of a technician in the field! From logistics point of view it should be ensured that:

- Spare keyboards are delivered always loaded with customer specific tables
- with starting the system the tables are loaded automatically

The batch mode of the utility KbUtiUSB is made especially for this situation to allow support of the technicians. However, the programs alone are not helpful for a technician!

Double, Triple, and Quad keys only have a cylindric part responsible for generating the respective code. So it is useful to assign the code to all possible positions covered by a key.

# Appendix

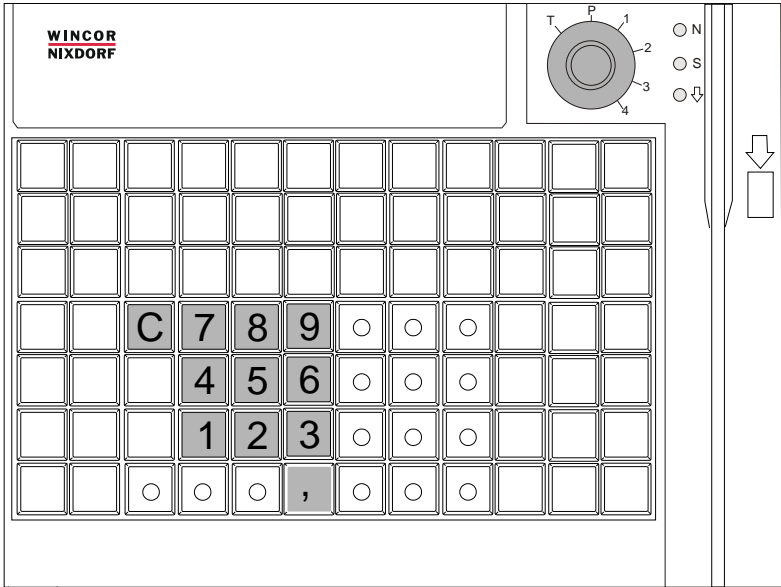
## Technical Data

<b>Housing dimensions/ weight</b>	Footprint: 280mm * 189mm Height: 54mm; weight: 1.16 kg
<b>Cable length</b>	Optional: 0.5 m, 1.0 m, 2.0 m, 3.0 m or 5.0 m
<b>Power Supply</b>	4.35.... 5.25V, max. 100mA
<b>Protocol</b>	USB2.0 interface, bi-directional, serial, 12 MBit/s (FullSpeed), USB- Hid (1.1)
<b>Connection</b>	USB- B- connector
<b>Keyboard</b>	Keyboard with variable key assignment, pseudo- N- Key-rollover*
<b>Microprocessor</b>	CMOS-CPU C8051F34x, mixed Signal
<b>FlashROM</b>	64 KByte
<b>Power up- Reset</b>	yes
<b>Selftest</b>	yes
<b>LED's</b>	3 (Num Lock, Shift Lock, Scroll Lock)
<b>Technology</b>	CMOS, Standard TTL
<b>Key Switch</b>	5 Switch positions: Key in position 0 and 1 removable
<b>Swipe card reader</b>	Number of tracks : 3 Magnetic card coding: to ISO 7811/2 Reading rate: 10 to 140cm/s

\*More than one keys pressed at the same time are accepted. When more than 2 keys in a L-combination are pressed simultaneously, the operation is disabled.

# Keyboard layout

This is the keyboard layout delivered ex works. With the TA85P- USB keyboard it is possible to shift the numerical block. You can also use any key, depending on the applicated program.



- Labelled key, single (fitted at the factory)
- 9 Key with inscription (numeric keypad)
- Freely assignable

A useful assignment of the TA85P- USB in the default setting:



**Note**

In these cases only the key "0" as ASCII-Code is given from the keyboard. Other keys ("0") must be evaluated before application.

## Tastatur Codes TA85P- USB

1 0 27h	2 1 1Eh	3 2 1Fh	4 3 20h	5 4 21h	6 5 22h	7 6 23h	8 7 24h	9 8 25h	10 T 17h	11 F11 44h	12 F12 45h
13 / 38h	14 ; 33h	15 = 2Eh	16 [ 2Fh	17 \ 31h	18 ] 30h	19 . 34h	20 , 35h	21 . 37h	22 > 64h	23 * 55h	24 - 2Dh
25 ESC 29h	26 BS 2Ah	27 F1 3Ah	28 F2 3Bh	29 F3 3Ch	30 F4 3Dh	31 F5 3Eh	32 F6 3Fh	33 F7 40h	34 F8 41h	35 F9 42h	36 F10 43h
37 Home 4Ah	38 Cur.up 52h	39 Pg.up 4B	40 7 Num 5Fh	41 8 Num 60h	42 9 Num 61h	43 A 04h	44 B 05h	45 C 06h	46 D 07h	47 E 08h	48 F 09h
49 Cu.lft 50h	50 Blank 2Ch	51 Cur.rt 4Fh	52 4 Num 5Ch	53 5 Num 5Dh	54 6 Num 5Eh	55 G 0Ah	56 H 0Bh	57 I 0Ch	58 J 0Dh	59 K 0Eh	60 L 0Fh
61 END 4Dh	62 Cur.dn 51h	63 P.dn 4Eh	64 1 Num 59h	65 2 Num 5Ah	66 3 Num 5Bh	67 CR 28h	68 M 10h	69 Z 1Dh	70 O 12h	71 P 13h	72 Q 14h
73 +Num 57h	74 - Num 56h	75 0 Num 62h	76 R 15h	77 S 16h	78 .br/>63h	79 U 18h	80 V 19h	81 W 1Ah	82 X 1Bh	83 Y 1Ch	84 N 11h

61

Keynumber

END

Meaning of the Key,

4Dh

HID-UsageID (Keycode)