NOVEXX SOLUTIONS

USER MANUAL

LTSI

Applicator

Edition 1 - 2/2016

Using the Documentation

CAUTION!
Read the user manual before operating the device for the first time.
The user manual is an essential part of the device it belongs to.
The user manual is to be stored at the machine operating location and made accessible to the operator.

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Documentation structure

Datapool, documentation object

The overall documentation is a part of the datapool, which is provided for the printer user and the service personnel on CD or other electronic media.

Datapool

This datapool includes:

– this printer documentation,
– the printer drivers

Printer doc

Here the overall documentation (abbr.: documentation) is to be understood as the printer documentation.

The printer documentation contains all the information which is required for using the product. Using the product means preparing it for use, putting it into operation, setting it up, the operation, servicing and maintenance, fault searching and the service for optional extensions, settings and repairs.

Doc object

The documentation object includes

– various printer families (printer series), consisting of different printer models (devices),
– standard and optional additions for the printer (options) and
– the printer language Easy Plug.

Documentation concept

The wide range of products which must be documented and the demand for documentation distribution and use, both in electronic form (CD/Internet, PC) as well as in paper form, have resulted in the following documentation concept:

Structure

The documentation consists of

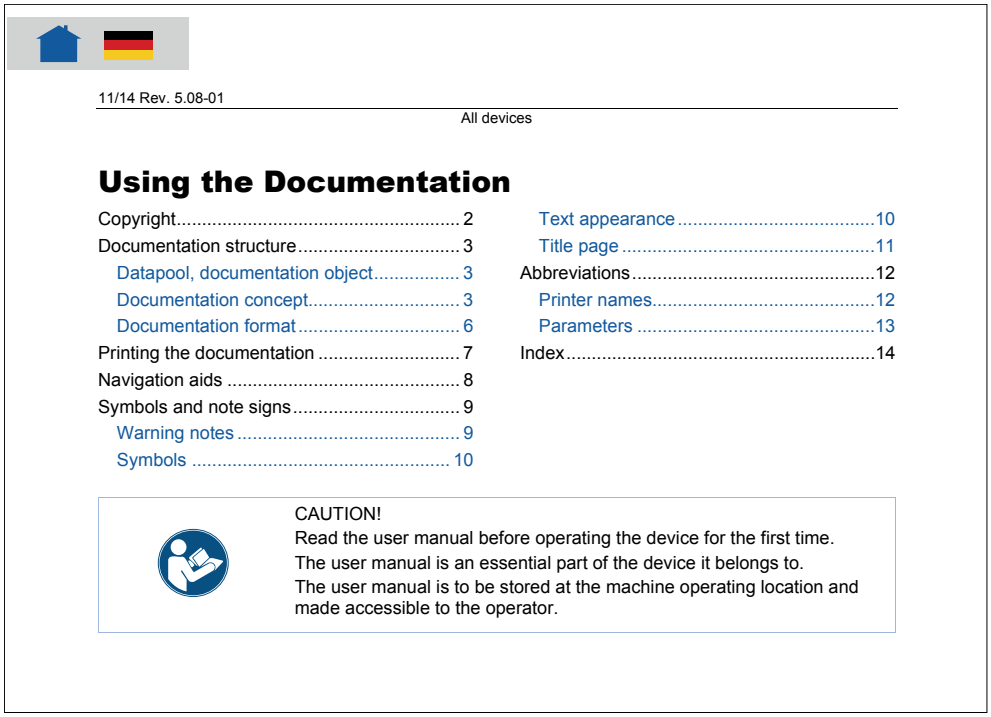
- topic sections (generally comparable to chapters),
- manuals (handbooks, instructions),
- link pages and the
- start page (start page of the CD documentation).

Subject section

Thematically-related subject contents are described in each topic section. A topic section is the smallest unit of information with its own

- page numbering,
- header bar,
- list of contents,
- index,
- device classification and
- its own revision status.

Subject sections form the basis of the manual. A topic section can be simultaneously assigned to several manuals. Subject sections are in one, in some cases two, languages.



11/14 Rev. 5.08-01
All devices

Using the Documentation

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Fig. 1 Example: First page of topic section "Using the Documentation"

Manual

A manual is composed of different topic sections. The following features characterize a manual:

- Title page with a list of contents, device classification and revision status (see Fig. 1).
- The list of contents contains the designations of the topic sections and also serves as a link distributor to these topic sections.
- The contents of a manual refer to a certain device, a device family or an option (documentation object).
- A manual is assigned to a certain language and only contains topic sections in this language.
- A manual is assigned to a certain user group. There are *Service Manuals* (mainly for the Service), *User Manuals* (mainly for the user) and just *Manuals* (for Service and user).

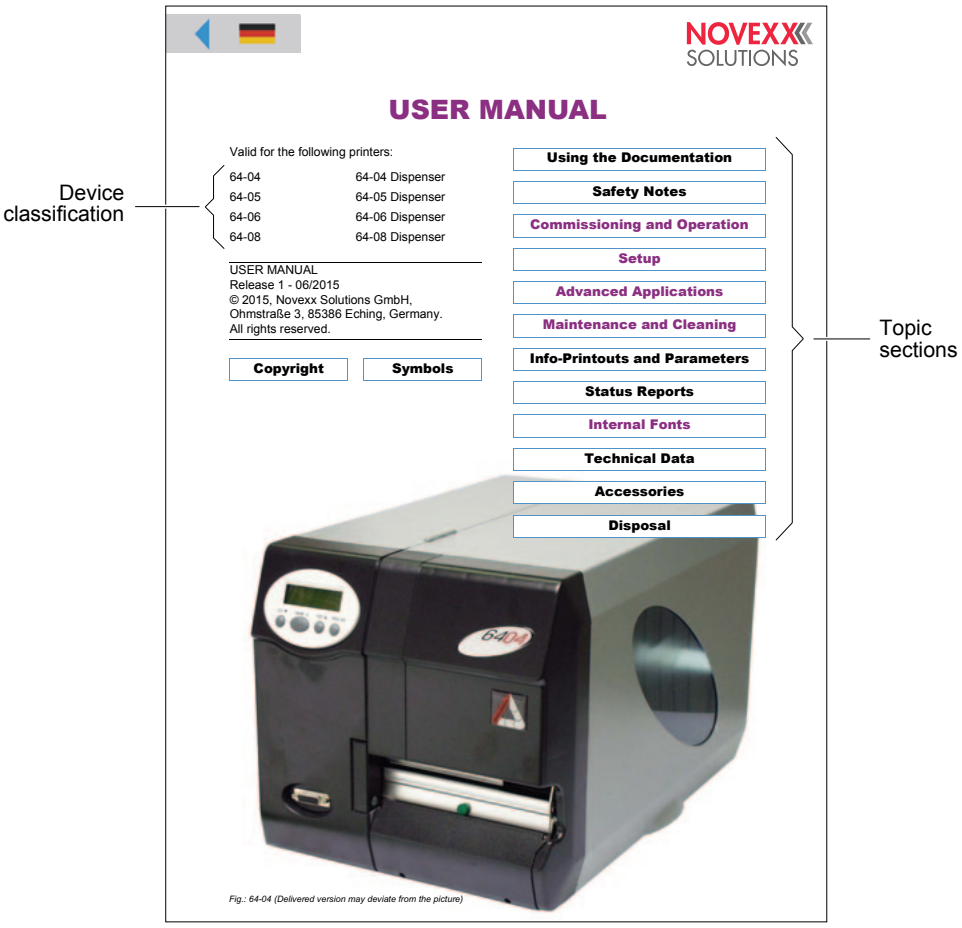


Fig. 1 Each Manual title page provides a list of topic section in its right half.

To a certain extent manuals are only virtual, as the same topic section can be simultaneously assigned to different manuals (the topic section physically only exists once).

Subject sections which are only assigned to a single manual are colour-coded on the title page of the manual (in the same colour as the title of the manual, see "Symbols and note signs").

Link page

A link page is only an organisational component of the datapool available on electronic media. The following features characterize a link page:

– Assignment to a single language

– Function as a link distributor to the individual manuals (access to the overall documentation of the corresponding language)

– Function as a link distributor to other components of the datapool provided on the electronic medium (e. g. printer drivers and print and design software in the corresponding language)

Start page

The start page is also only an organisational component and is displayed when the CD starts, or on the Internet on the link to the printer datapool. The following features characterize a start page:

– Assignment is irrespective of the language or multilingual

– Function for the language selection made by the user

– Function as a link distributor to the link page with the selected language.

This gives the following documentation hierarchy:

Hierarchy

1. Start page (selection of the language)
2. Link page (selection of the manual)
3. Manual title page (selection of the topic section)
4. Subject section contents page (selection of the subtheme)

In most cases, the subtheme selected in step 4 equates to the information being searched for. For instance, the selection of the status number in the list of contents of the topic section leads straight to the description of this status number.

Documentation format

All elements of the printer overall documentation are in Adobe PDF (Portable Document Format). This has the following practical advantages:

Printing

- The documents can be printed in the required quality irrespective of the printer type and the fonts which are used.

Memory

- Less memory is required for saving the document due to differentiated data compression (faster loading, faster printing).

Internet

- Internet compatibility due to the relatively small amount of data.

License

- Simple distribution without the need to purchase licenses (Adobe Reader licenses are provided free of charge by Adobe worldwide and in many languages).

Platform

- Can run on different platforms (Windows/Macintosh/Linux)

Links

- Links within and between Acrobat documents, as well as links to documents in other formats and executable files.
- Other Acrobat Reader functions such as page returns, bookmarks, thumbnails, document-overlapping search function with an automated index, etc.

❍ More detailed information about the Acrobat Reader is contained in the Acrobat online help.

Printing the documentation

In order to make the documentation readable without a PC, the documents can be printed in A4 as well as in Letter format. For printing, the Acrobat Reader uses the print capabilities of the platform it is run on. The layout of the printed documents equals the appearance on the monitor screen.

Mind the following hints before you start to print:

When printing several manuals, it is not necessary to print out all topic sections starting with the title page.

– Only print out the topic sections marked in black once. These topic sections are referenced from different Manuals. Physically, they consist of the same data.

– Always print out all subjects marked in purple. Reference is only made once in the respective manual to each purple topic section.

When printing all of only one manual, it is necessary to print out all topic sections in this manual starting from the title page.

Example

- In order to print a *user manual*, proceed as follows:

1. Print the title page.
2. Click the topic sections on the right half of the title page one after the other. Print each topic section completely.

- In order to print the *service manual* additionally, switch to the title page of the service manual and only click the topic sections written in purple. Print those topic sections. The remaining black topic sections are already printed with the user manual.

Text integration

It is also possible to integrate documentation text (and images) in other documents using the Windows clipboard. As a result, e. g. order information (spare part designations and part numbers) can be used simply and with no additional effort.

Pay attention to copyright restrictions. Information on this subject can be found under "Copyright".

Navigation aids

Info search

The following options are available for quickly searching for information in the paper documentation:

- The title page of each manual with a list of contents of the topic section
- The detailed list of contents with page numbers on the first page of each topic section
- The own page numbering of each topic section
- The index at the end of each topic section.

Links

In the top left corner of each title page and on the first page of each topic section, you find small graphics, which ease the change back to higher levels of the documentation (see Tab. 1).

Symbol	Meaning
	*Triangle*: Link to the last opened page.
	*Triangle*: Link to the last opened page. *House*: Link to the menu page. *Flag*: Link to the german page of identical content. On the corresponding german page, a british flag symbolizes the cross-reference to the british page.
 	*Houses with flags*: Links to the menu pages in different languages. Is used in bilingual topic sections (e.g. spare parts lists).

Tab. 1 Navigation aids can be found on the first pages of the PDF-documents.

Symbols and note signs

Warning notes

Warning notes warn of a possibly dangerous situation. Personal injury, material damage or data loss are possible, if care is not taken.

Depending on the dimension of possible damages, the warning notes look different:

- Warning note, which warns of a danger that can lead to injuries, if the dangerous situation is not avoided. Appearance: Exclamation mark in a triangle, signal word “WARNING”, blue frame, blue shaded text field (see below).

WARNING!

Description of the *danger source*.
Description of *possible personal injury*.

➜ *Measure* to avoid personal injury.

➜ Further measure to avoid personal injury.

➜ …

- Warning note, which warns of a danger that can lead to material damage or data loss, if the dangerous situation is not avoided. Appearance: Exclamation mark in a triangle, signal word “CAUTION”, blue frame (see below)..

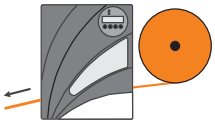
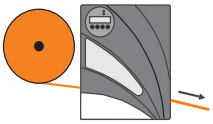
CAUTION!

Description of the *danger source*.
Description of *possible material damage*.

➜ Measure to avoid material damage.

➜ ...

Symbols

	Warning of the risk of injury due to moving or rapidly rotating parts! Long hair, loose jewellery, long sleeves, etc.are not admissible when operating the machine. Wear sufficient personal protection gear.
	Tools required for the described service action.
	Marks additional information, which has not necessarily to be read to operate the machine, but which improves the understanding for the described function.
	Lefthand version (LH version): Symbol marking a text section which refers to the LH version of a device. (Only important for DPM, PEM and ALX 92x)
	Righthand version (RH version): Symbol marking a text section which refers to the RH version of a device. (Only important for DPM, PEM and ALX 92x)
	CE label: Documents the EC conformity of the device.
	Recycling: Notes about disposal. Pay attention to environmental protection!
	Arrow at the right bottom corner: paragraph is continued on the following page. 

Text appearance

	1. (Numbered) Action instructions, introductory text: 2. follow the sequence!
	➔ Focus arrow: action instructions, sequence not stipulated.
	Note arrow: special note. Pay attention!
	• Focus point: feature, extra paragraph.
	❍ Focus circle: Reference to another text position or info source.
	✓ Exists. Completed. Yes. Applies.
Blue text with link symbol	Link to other positions in the documentation (click). Exception: In lists of contents, the black text is also linked.

Title page

Link	Black text in the blue frame: link to topic sections which occur several times in different manuals (click).
Link	Purple text in the blue frame: link to a topic section which only occurs once and belongs specifically to the manual (click).
Link	Blue text in the blue frame: A click on the text starts an executable program, e.g. the printer driver unpacking program starting from the "Manual printer driver" title page.

Abbreviations

Printer names

If there is not enough space to call all printers by their full names, the abbreviated spellings listed in Tab. 2 are used.

Spelling	Meaning	Example, note
64-04/05	64-04, 64-05	
64bit series	Printer/Print-Dispenser with 64bit electronics	64-xx, DPM, PEM, ALX 92x
64-xx	Tabletop printer with 64bit electronics	64-04, 64-05, 64-06, 64-08
ALX 92x	Print-Dispenser of the ALX 92x series	ALX 924, ALX 925, ALX 926

Tab. 2 Abbreviated spelling of printers.

Parameters

The notation of parameters is done as follows:
MENU > Parameter name

Example:
INTERF. PARAM. > Interface
(Parameter “Interface” in the menu “INTERF. PARAM.”)

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Safety Notes

Note about printer names

The protective measures described in the following count for all printers (e. g. 64-xx), print-and-apply machines (e. g. ALX 92x) and print-and-apply modules (DPM) distributed by Novexx Solutions.

➠ In this document, all above mentioned printer types are referred to as „machine“.

Information and qualifications

Follow the instructions

Safe and efficient operation of the printer can only be guaranteed if you observe all necessary information.

Product liability and warranty can only be claimed, if the printer was operated according to the notes and instructions in the user manual.

➔ Before operating the device, read the operating instructions and all other notes carefully.

➔ Observe the additional safety and warning notes on the device.

Information must be made available

This operating manual…

➔ is to be stored at the printer operating location and made accessible to the operator.

➔ is to be maintained in legible condition.

➔ If the machine is sold, it must be made available to the new owner

➔ Safety and warning notices attached to the machine must be kept clean and legible. Missing or damaged warning labels and plates are to be replaced.

Ensure necessary qualifications

Operation

➔ Only allow the printer to be operated, adjusted and serviced by instructed and authorised personnel.

Instruction of the operating personnel must ensure

- that operating personnel can use the machine independently and without posing a danger.
- that operating personnel can remedy minor operational malfunctions themselves.

➔ Train at least 2 persons to operate the machine.

➔ Make label materials for test purposes available in sufficient quantities.

➔ Moreover, personnel are to be regularly instructed about work safety and environmental protection issues.

➔ The responsibilities for operation, adjustment and servicing of the machine must be clearly defined and consistently maintained.

➔ Only make adjustments to the machine in accordance with this manual and with all due care.

Service

Special servicing, fault searching and fault correction are to be carried out by the manufacturer, his appointees or other authorised service agents. This also includes the optional installation and refitting of components.

Machine operating safety

Conditions for safe use

➔ Only use the machine in enclosed areas with environmental conditions matching the values given in the technical specifications.

➔ Only operate the machine on a plane, solid support.

➔ Only trained and authorized personnel should operate the printer!

➔ During operation, the printhead can become hot! Care should be taken when touching the printhead!

➔ Do not make any modifications or any additional casing for the machine!

➔ Do not allow any liquids to enter into the machine!

➔ Repairs to the machine may only be performed by authorized specialists who are aware of the risks involved!

➔ Make sure that the power supply socket for the machine is readily accessible!

➔ Lay the power supply cable, data cables and compressed air hoses (if applicable) in a way that nobody can stumble over it.

➔ In case of emergency, switch off the machine and pull off the power supply cable!

➔ Only use original accessories!

Protect against injuries that can result from electrical current

➔ Only put the machine into operation when installed in a correctly installed housing.

➔ Only operate the machine using the system voltage indicated on the nameplate!

➔ Only connect the machine to a grounded power socket fitted to authorized standards!

➔ Only connect devices to the interfaces at the machine that fulfil SELV (safety extra-low voltage) circuit requirements according to EN 60950!

Protect against injuries that can result from mechanical actions

➔ Only operate the printer when the cover is closed!

➔ Don´t wear *loose* long hair (if necessary, wear a hairnet).

➔ Keep loose jewellery, long sleeves, etc. away from rotating parts or the printer.

➔ Wear sufficient personal protective equipment.

Applicator operation

The following printers can be operated with an applicator:

- 64-xx
- ALX 92x
- DPM

Operation with an applicator causes additional hazards, which must be safeguarded by the following additional protective measure:

➔ Only operate the printer, if it is equipped with an appropriate safeguarding device[1]. This device must stop the printer, if it is opened.

1) Movable interlocking guard according to EN ISO 12100-1, 3.25.4

Specifications

Application Notes

Intended Purpose

Applicators of type LTSI are additional units for all printer dispenser systems that are listed in the following section ("Printer type"). They take self-adhesive labels from the printer's dispenser mechanism and stick these onto moving or non-moving products.

The LTSI can be connected to the ALX 92x via a locking swivel mechanism or to the 64-xx via a rigid connecting plate. The electrical connection is made via a plug connector. The drive is provided by a stepper motor.

The LTSI is controlled via a programmable logic controller (PLC), which sends signals to the applicator via the machine's USI interface. The application process triggers a product sensor, which is also connected to the USI interface.

Installation position

Permissible installation positions for the LTSI are:

- *Vertical*, if application takes place from top to bottom (the product is located below the printer/applicator)
- *Horizontal* (the product is located next to the printer/applicator)

System Requirements

The LTSI can be operated on the following devices:

Printer type

Printer	Part number	
	LTSI 80/200	LTSI 80/400
64-xx Dispenser A	X0750	X0885
ALX 92x LH	X0801	X0900

Tab. 1: Printer and Print-and-Apply machines, to which the LTSI can be applied (LH = lefthand version).

Via the specified part numbers, you will receive a LTSI with installation material, connection cables and PLC, suitable for the devices listed in that line.

Firmware

Required version of the printer firmware: 2.46 or later.

USI

The printer must be equipped with a 24V USI interface meeting the following specifications:

- The USI circuit board must be of version 4 or later (part number A2345-*04*)
- The board must be fitted with a PIC with version V2-T1-F873 or later.

Start signal

The start signal must input into the START PRINT\ input of the USI interface.

➠ Triggering via the Single-Start input, as it was usual with TTX x50 printers, is not possible with 64-xx printer types.

➠ The Easy-Plug command #!D can *not* be used for generating a start signal.

Properties

LTSI = Light Touch Stepper Industrial.

Light Touch Light Touch means that the applicator reverses shortly after it encounters resistance, i.e. a product. This has the advantage that it also enables products of different heights to be labeled without needing to adjust the applicator.

Stepper The LTSI is driven by a stepper motor.

Industrial This indicates the high - industrial - quality of the guidance.

Mode of Operation

The LTSI waits in the zero position and sucks the label onto the foam plastic plate on its underside as soon as the label is dispensed. The suction pressure required for this is generated by a blower.

The LTSI then extends its 'telescopic arm' until it encounters resistance, presses the label firmly against the product and immediately reverses. By means of this automatic return ('Light Touch'), even products with different heights can be labeled with nothing further required. Unevenness of the product surface is compensated to a certain extend by the foam plastic plate.

❍ You can find a detailed graphical representation of the operation sequence in this topic section in the 'LTSI / LTP / LTPV Function Diagram' chapter.

Specifications

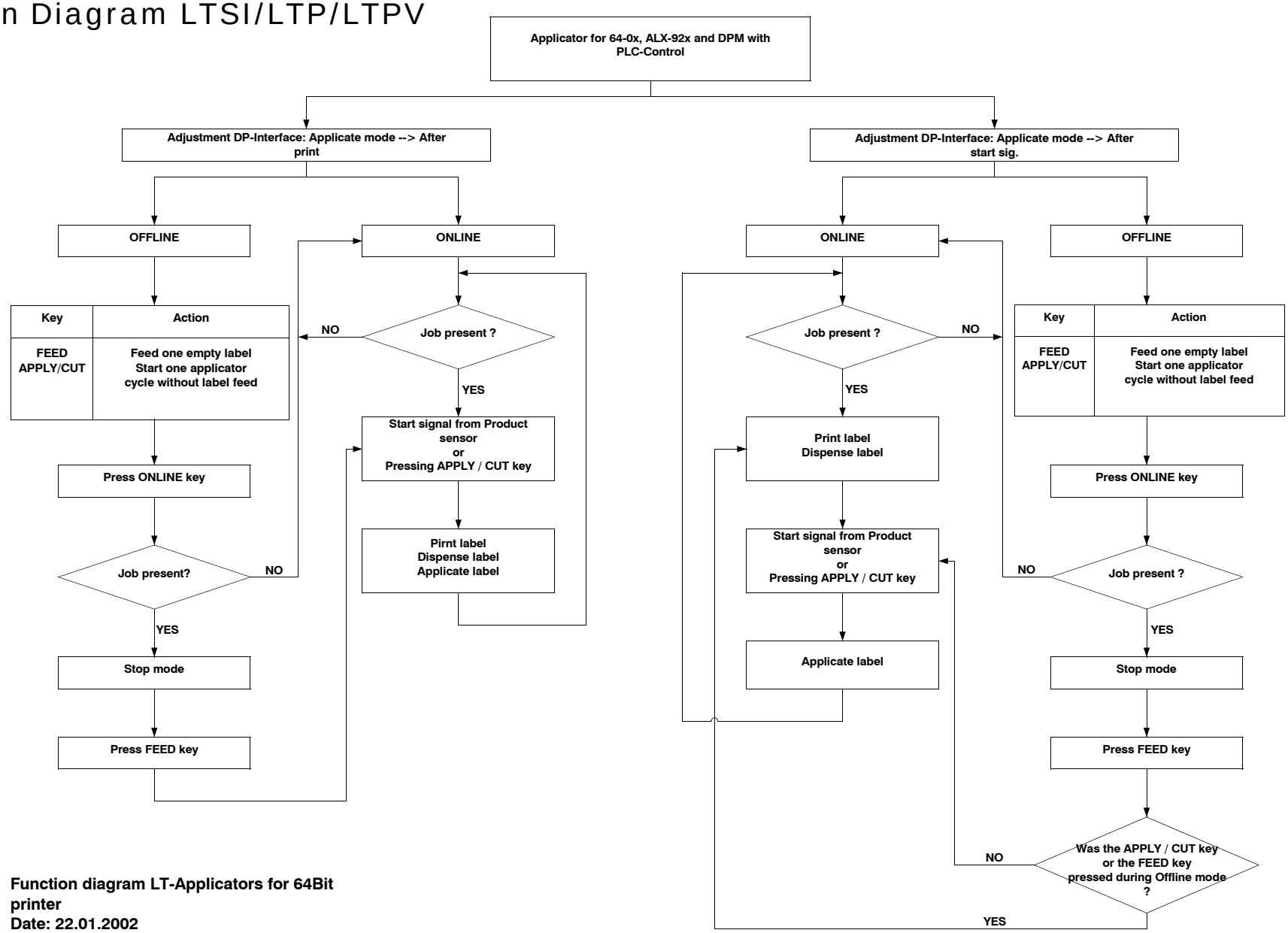
	LTSI 80/200	LTSI 80/400
Material type	Self-adhesive labels	
Label size (BxL)	min. 30 x 30 mm max. 80 x 80 mm	
Travel	max. 190 mm	max. 400 mm
Application speed	max. 50	
Product speed	max. 35 m/min	
Application angle	90° ± 3°	
Application accuracy	±1 mm	
Application pressure	8 N (with 90° application angle)	
Airstream source	Air blower	
Weight	3.2 kg	4.2 kg
Dimensions (wxhxd)	230 x 392 x 120 mm	230 x 612 x 120 mm
Noise level	< 70 dB(A)	

Tab. 2: Technical specifications of the LTSI.

	LTSI 80/200	LTSI 80/400
Environmental conditions	Enclosed rooms Working temperature: 5 to 40°C Storage temperature: 0 to 70°C Relative humidity: 30 to 80 %, non-condensing	

Tab. 2: Technical specifications of the LTSI.

Function Diagram LTSI/LTP/LTPV



Function diagram LT-Applicators for 64Bit printer
Date: 22.01.2002

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Mounting the PLC

System Requirements

Printer

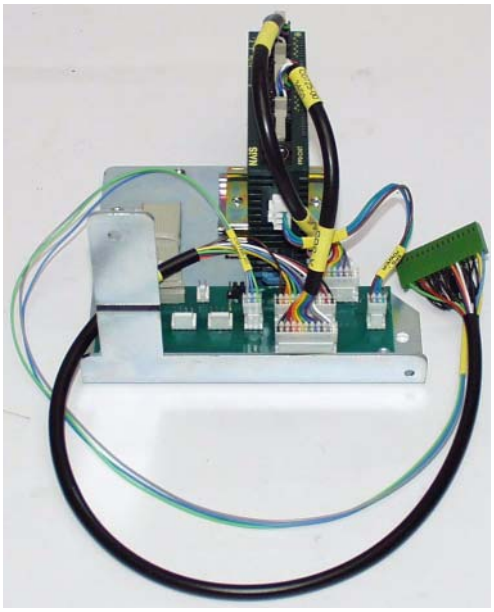
64-xx dispenser with USI interface board installed.

❍ For details see topic section „Technical Data“, chapter „System Requirements“.

Applicator

LTSI / LTP / LTPV

PLC module

Component	Part number	Picture
PLC module for LTP/LTPV	C0823 (LH)	
PLC module for LTSI	C0747 (LH)	
D-Sub cable harness	C0776	

Tab. 1: Required components to mount the PLC into a 64-xx. The PLC module is required only once; it has to match the applied applicator type.

Assembly

Safety

WARNING!

This unit operates at mains voltage! Coming into contact with electrically live components can cause potentially lethal electrical shocks and burns.

➜ Only authorised technicians are permitted to remove any parts of the enclosure.

➜ Before removing any parts of the enclosure, switch off the device and remove the mains plug.

If, after removing the enclosure, the device has to be switched on for repair and testing purposes, observe the following:

➜ Never touch electrically live components. This also applies to low-voltage components.

➜ Only operate the unit when the enclosure is properly installed.

➜ Never open the enclosure of the power supply. If the power supply is defective, you must replace the entire power supply.

➜ Ensure that the electrical system is functioning flawlessly.

- Test the electrical system on a regular basis.
- Retighten any loosened connections.
- Immediately replace any damaged lines.

➜ After assembling, check the printer according to the regulations relevant in your country.

CAUTION! - Protect the electronic components against damage from electrostatic discharge.

➜ Wear protective ESD gear.

➜ Place the device on an earthed pad before opening it.

Required Tools

- Philips screwdriver sizes 1 and 3
- Screwdriver of medium size
- Hex socket wrench WAF 4.5
- Allen key 3 mm with ball head
- Flat nose pliers

Fitting the Cable Harness

1. Switch off the device and disconnect the power plug from the power outlet!
2. Remove the rear cover and the left front housing.

❍ How to? - see Service Manual 64-xx, topic section Service Mechanics, chapter „Housing“.

3. Disconnect the D-Sub cable harness. Unscrew the ground strap from the printer bottom.
4. Unscrew the D-Sub plug from the housing.
5. Fit the D-Sub plug of the *new* cable harness to the housing (fig. 1).

Fitting the PLC

1. Remove the fixing screws of the power supply.

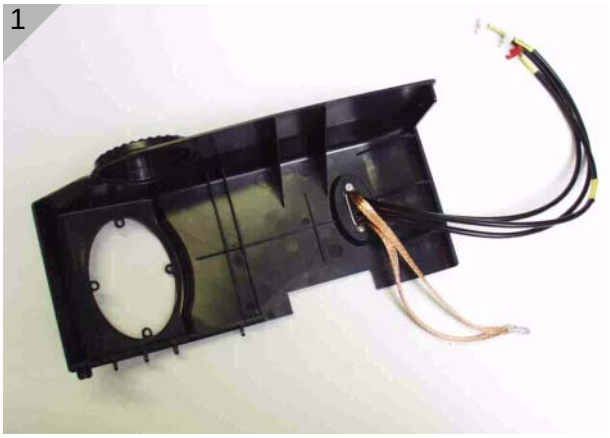
❍ How to? - see Service Manual 64-xx, topic section Service Mechanics, chapter „Connections and Electrics“, „Power Supply“.

➠ Leave the angled plate (1) fixed to the power supply!

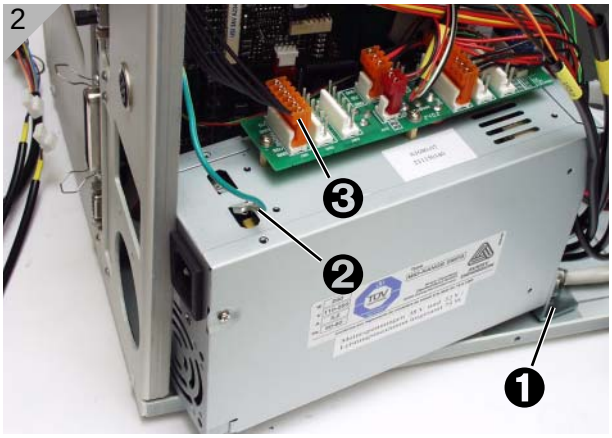
2. Disconnect the ground cable (2) and the plug (3), to be able to move the power supply farther out of the printer housing.
3. Pull the power supply slightly out of the printer housing as illustrated (fig. 2 and 3).

❍ Continued overleaf.

1



2



3

4. Remove the cable clamp (1) from the printer bottom (by means of a screwdriver).

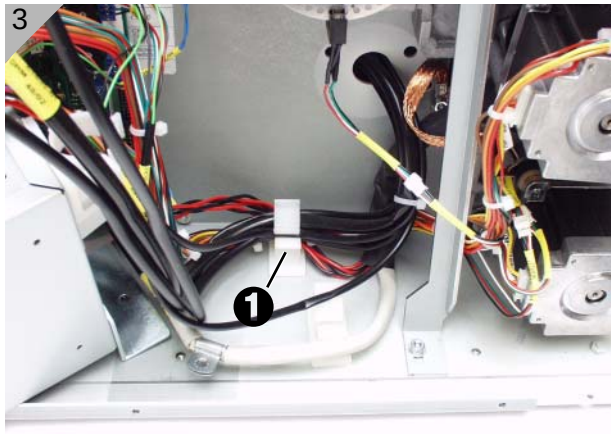
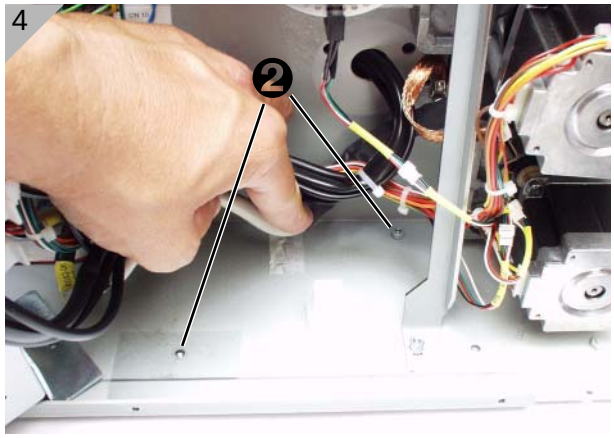


Fig. 4 shows the two fixing holes (2) to which the PLC module is screwed. The frontal hole was beforehand used to fix the power supply. The rear hole already bears a screw which can be used to fix the PLC module.

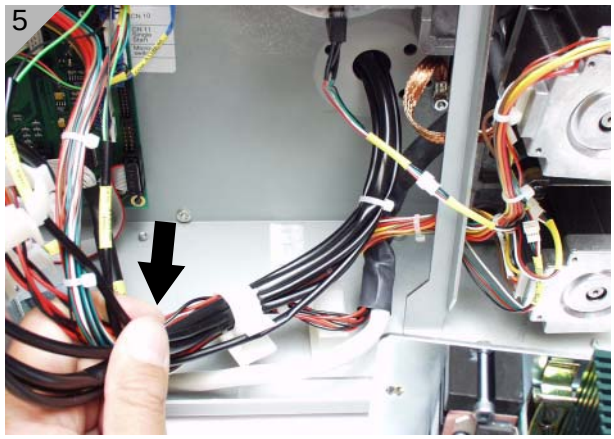


5. Unscrew the rear fixing screw out of the printer bottom.

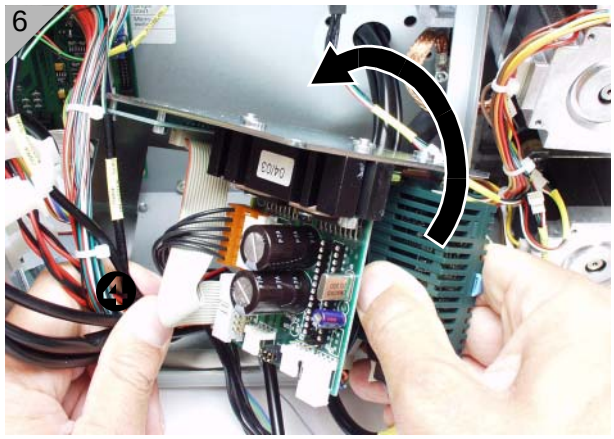
6. Pull at the wiring harness (3) as illustrated to make room for the insertion of the PLC module (fig. 5).

7. Turn the PLC module *carefully* over the wiring harness into the printer (fig. 6).

➠ The carrier plate of the PLC module must have contact to both, printer bottom and partitioning wall!



❍ Continued overleaf.



8. Right now is the best moment to connect the PLC module to the USI board!

❍ See paragraph Connecting the PLC for LTP/LTPV operation on page 7 respectively paragraph Connecting the PLC for LTSI operation on page 8.

9. Put the power supply in its initial position and fix it at the angled plate (fig. 7). Reconnect the cables you unplugged before.

➠ Order of the parts which are fixed by the screw: cable clamp, PLC module, angled plate (top down).

10. Screw the rear fixing screw into the PLC module plate.

➠ To do so, hold the screw with some flat nose pliers and turn it in using the 4 mm allen key with ball head!

11. Tighten all the fixing screws of power supply and PLC module.

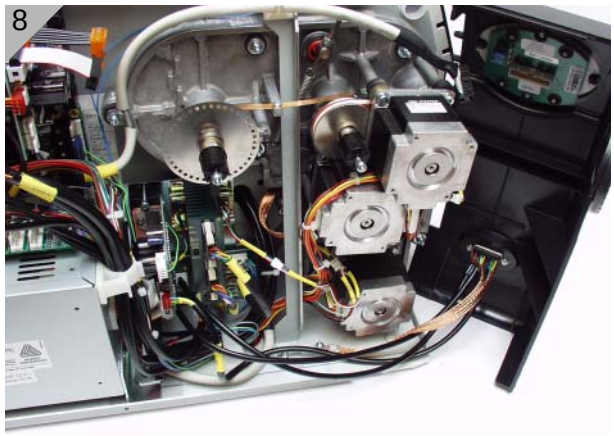
12. Connect the PLC module as it is shown in the following paragraphs.

13. Fix the cables by means of the cable clamps (fig. 8).

14. Reassemble the housing parts.

7

8



Connecting the PLC for LTP/ LTPV operation

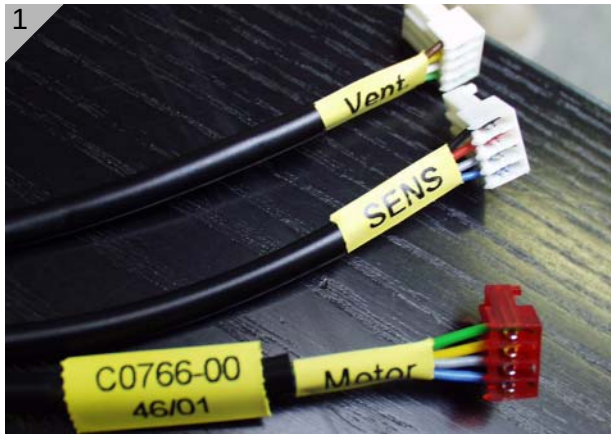
❍ Also refer to section Connection Diagram 64-xx on page 10.

The cable harness fitted earlier consists of three cables, labeled VENT, SENS and MOTOR. Two connectors on the PLC board are also labeled VENT and SENS (see figs. 1 and 2).

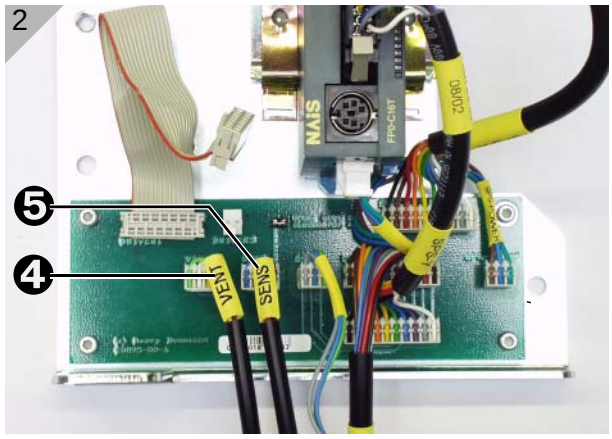
1. Connect the VENT (4) and SENS (5) cables, which are part of the cable harness, to the sockets on the PLC board that bear the same names (fig. 2).

➠ *Don´t* plug in the cable labeled MOTOR!

1

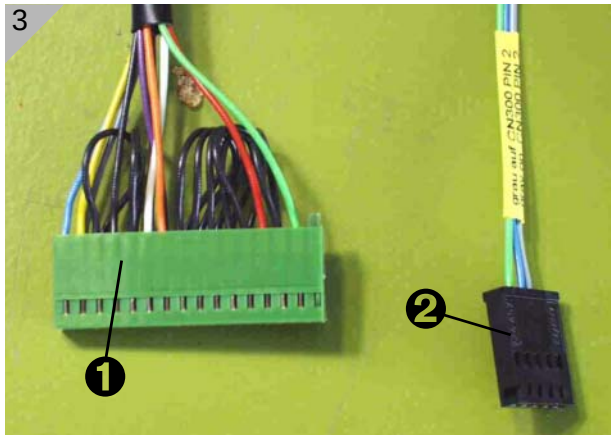


2



The plugs (1) and (2) are located on two of the cables that are already plugged into the PLC board (fig. 3).

3



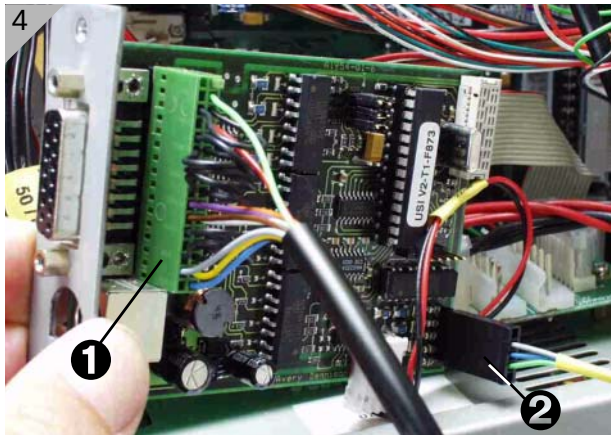
2. Connect plugs (1) and (2) to the USI board (fig. 4).

➠ Plug the plug (1) exactly into the position shown!

➠ When plugging in plug (2), pay attention to the information on the cable sleeve!

3. Reassemble the housing parts.

4

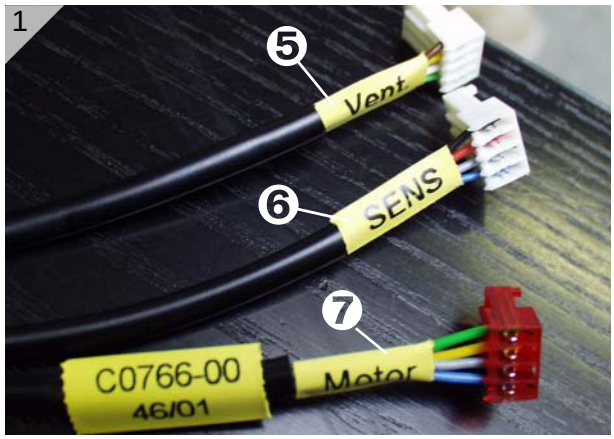


Connecting the PLC for LTSI operation

❍ Also refer to section Connection Diagram 64-xx on page 10.

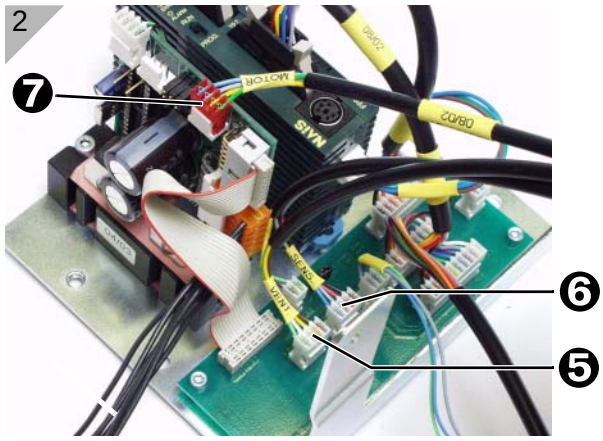
The cable harness fitted earlier consists of three cables, labeled VENT, SENS and MOTOR (fig. 1). Two connectors on the PLC board are also labeled VENT and SENS.

1



1. Connect the VENT (5) and SENS (6) cables, which are part of the cable harness, to the sockets on the PLC board that bear the same names (fig. 2).
2. Connect the MOTOR (7) cable, which is part of the cable harness, to the output stage board (fig. 2).

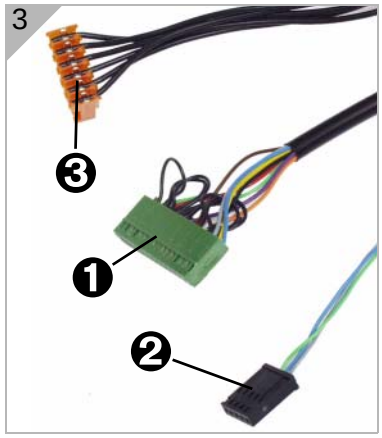
2



The plugs (1), (2) and (3) are located on two of the cables that are already plugged into the PLC board (fig. 3).

❍ Continued overleaf.

3

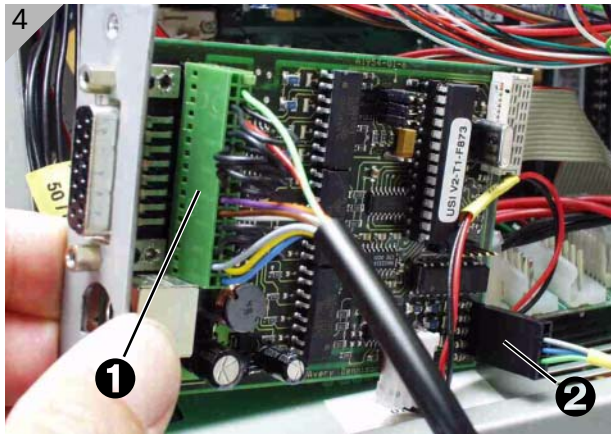


3. Connect the plugs (1) and (2) to the USI board (fig. 4).

➠ Plug the plug (1) exactly into the position shown!

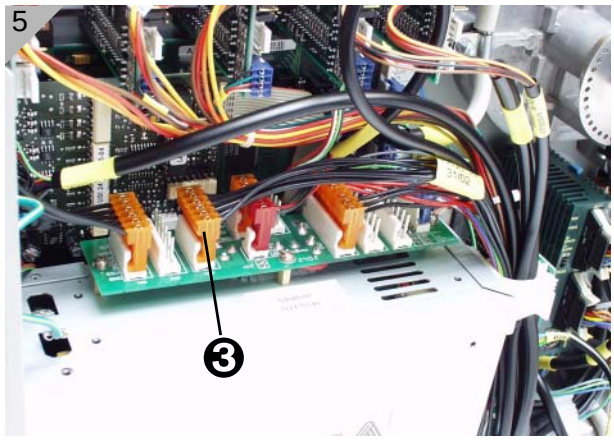
➠ When plugging in plug (2), pay attention to the information on the cable sleeve!

4



4. Connect plug (3) to the power supply (fig. 5).
5. Reassemble the housing parts.

5



Appendix

Connection Diagram 64-xx

LTP/LTPV

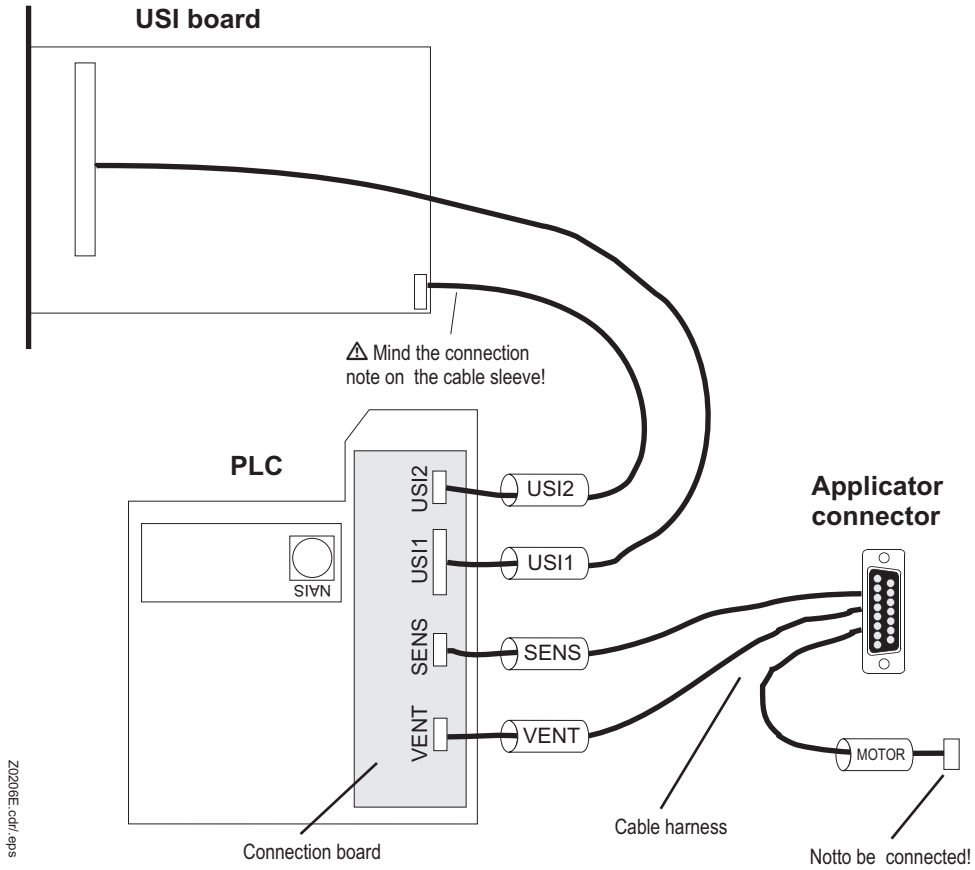


Fig. 1: Correct connection of the PLC for LTP/LTPV to an 64-xx.

LTSI

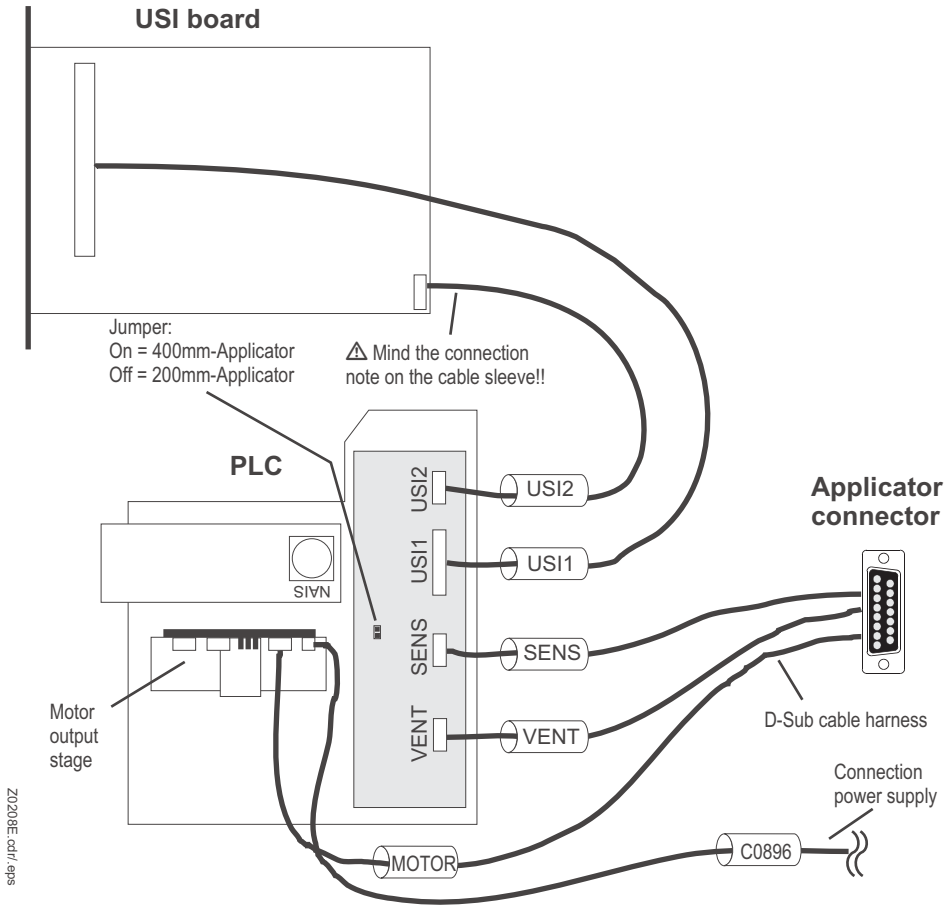


Fig. 2: Correct connection of the PLC for LTSI to an 64-xx.

Signal-LEDs at the PLC

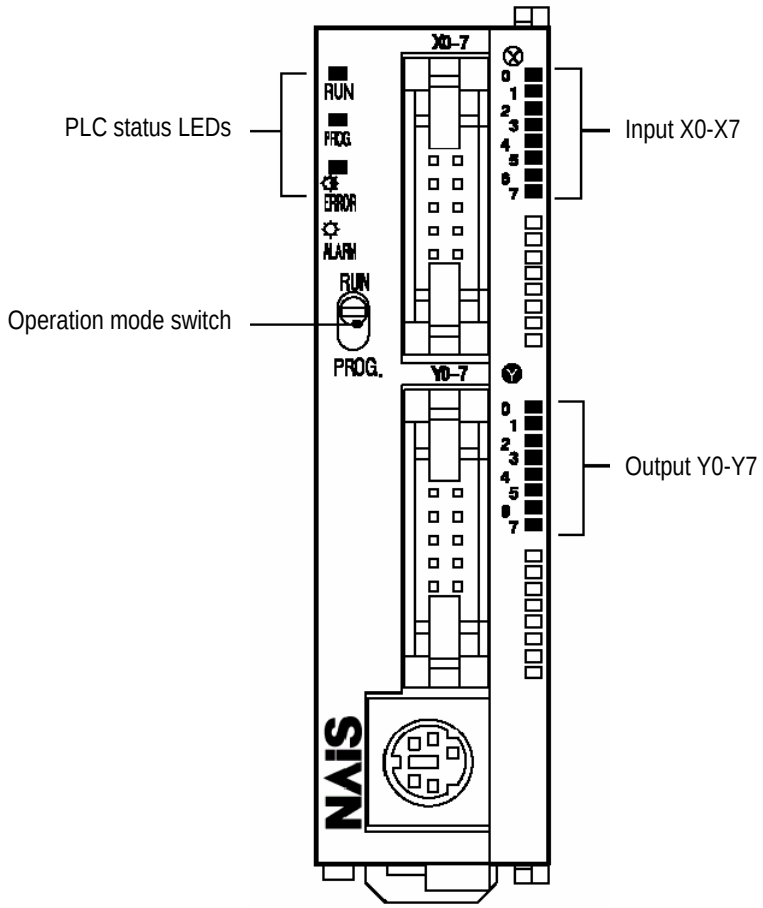


Fig. 3: Control elements at the PLC.

Operation mode switch

Must be set to RUN for normal operation.

PLC status LEDs

LED	Meaning
RUN	PLC is switched to run mode (the program is running)
PROG	PLC is switched to program mode
ERROR	Lights or is blinking: indicates a PLC error

Tab. 1: Bedeutung der SPS-Status-LEDs.

Input LEDs

A lighting LED indicates that a signal is active at the respective input. The inputs work analogous to the printer USI with low-active signals. Thus, a lighting-up LED shows a GND signal at the input.

Input assignment:

LED	LTSI / LTP / LTPV
X0	Touchdown sensor: On = *No* touchdown signal
X1	Home position sensor: On = Applicator is *not* in home position
X2	Product sensor: On = Product detected
X3	Print_End signal coming from USI: On = Printing / feeding is active
X4	Error signal coming from USI On = Printer set to Stop/Offline
X5	Machine status signal coming from USI On = Printer is in error mode
X6	Applicator mode signal coming from USI: On = „After print“ mode Off = „After start signal“ mode
X7	Signal coming from the jumper on the board (which is part of the whole PLC module): Off = 200 mm Applicator On = 400 mm Applicator

Tab. 2: PLC input-LED assignment.

Output LEDs

A lighting LED indicates that a signal is active at the respective output. The outputs work analogous to the printer USI with low-active signals. Thus, a lighting-up LED shows a GND signal at the output.

Output assignment:

LED	LTSI	LTP / LTPV
Y0	Motor clock signal: lights up during any motor movement	Cylinder valve: On = Cylinder piston moves down
Y1	• Print_End signal at the 15-pin output connector of the USI (analogous to the USI description) • *Starting with program version 5.0*[a]*:* Display of the applicator home position: On = Applicator in home position	• Print_End signal at the 15-pin output connector of the USI (analogous USI description) • *Additionally*, the support air valve is triggered: *O*n = Support air is blowing (during the feeding)

Tab. 3: PLC output-LED assignment.

LED	LTSI	LTP / LTPV
Y2	Motor direction: On = Down movement	Vacuum valve: On = Vacuum switched on (from feed start until application)
Y3	Error signal to the 15-pin output connector at the USI (analogous to the USI description)	
Y4	Start_Print signal to the USI: On = Label printing is enabled	
Y5	SPS ready signal to the USI: On = SPS enabled without error and in RUN mode	
Y6	Touchdown error signal to the USI: On = No touchdown error occured	
Y7	Homeposition error signal to the USI: On = No homeposition error occured	

Tab. 3: PLC output-LED assignment.

a. The program version can be read on a label on the PLC housing.

Mounting and setting the LTSI

Required Components

Component	Part number	Picture
Basic module LTSI 80/200 (fig.)	A4787	
Basic module LTSI 80/400	A4788	
Aluminium plate (with screws 2x DIN912 M5x12 and 2x DIN912 M8x20)	A2661	

[Tab. 1] Required components to fit the LTSI to an 64-xx. The basic module is only required in one version.

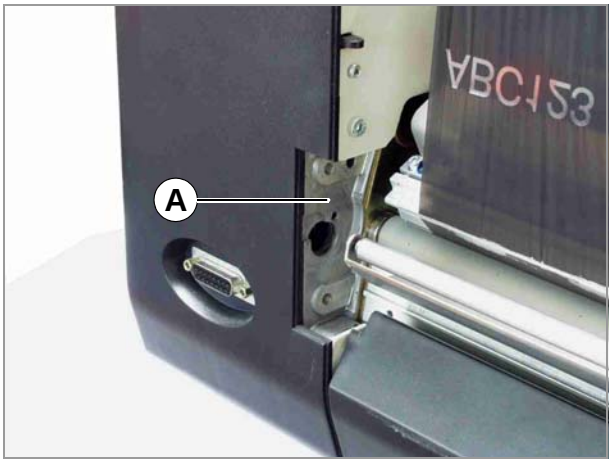
Fitting the Applicator

Tools

Allen screwdriver 4 and 6 mm

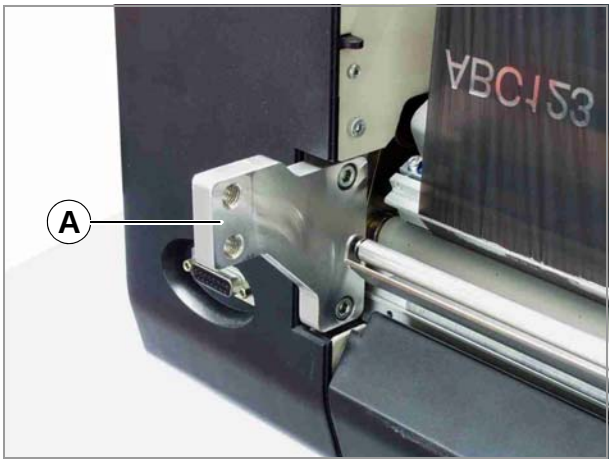
Mounting

1. Switch off the printer and disconnect the power plug from the power outlet!
2. Remove the flange cover from the mounting flange [1A]



[6] Applicator mounting flange (A).

3. Bolt the adapter plate [2A] onto the mounting flange (2x M5x16).



[7] Adapter plate (A) ready mounted.

4. Bolt the applicator to the aluminium plate (2x M8x20 with lock washers) [3].
5. Plug the applicator cable to the printer [3A].

[8] LTSI ready mounted and connected.

Setting the Applicator

WARNING!

Danger of getting hands crushed at the following locations:

- Between applicator pressure plate and printer dispensing edge.
- Between applicator pressure plate and conveyor (if applicable).

➔ During operation, keep your hands away from the moving area of the applicator.

➔ Switch off the printer before any servicing or repair work.

„Must“-parameters

Parameter	Setting
DISPENSER PARA > Start source	USI
DISPENSER PARA > Dispensing edge	long
DP INTERFACE > Interface type	USI applicator
DP INTERFACE > Start print mode	Level low active [a]
DP INTERFACE > End print mode	Mode 1
DP INTERFACE > Internal inputs	Enabled

[Tab. 2] These parameter settings are imperative for the printer operation with an applicator.

a) This setting is imperative, if parameter DP INTERFACE > Apply mode is set to „After start sig.“

„Can“-parameters

Parameter
DISPENSER PARA > Application mode
DP INTERFACE > Start print mode [a]
DP INTERFACE > Apply mode

[Tab. 3] These parameters can be used to adapt the applicator operation to the application.

a) This setting is only arbitrary, if parameter DP INTERFACE > Apply mode is set to „After print“.

Adjusting the Applicator Home Position

After fitting the applicator, the home position of the applicator must be checked and adjusted if necessary. When viewed from the side, the applicator plate must stand slightly above and in front of the dispensing edge [4].

➠ The following guide values may used for the distances from the dispensing edge:

- Horizontal: approx. 1 mm

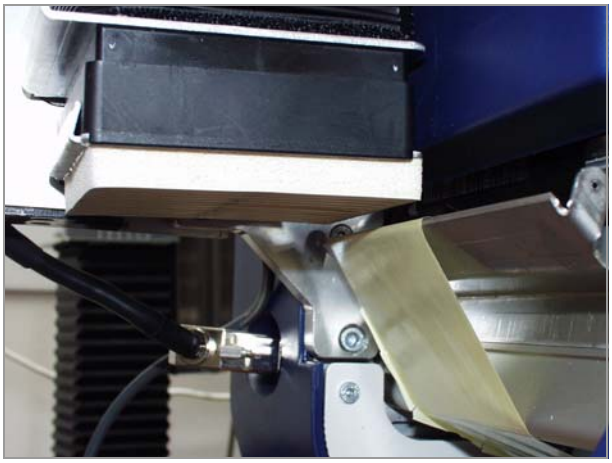
  To adjust: Shifting of the left aluminium plate [5A]

  – upwards --> shifts the home position further away from the dispensing edge.
  – downwards --> shifts the home position closer to the dispensing edge.

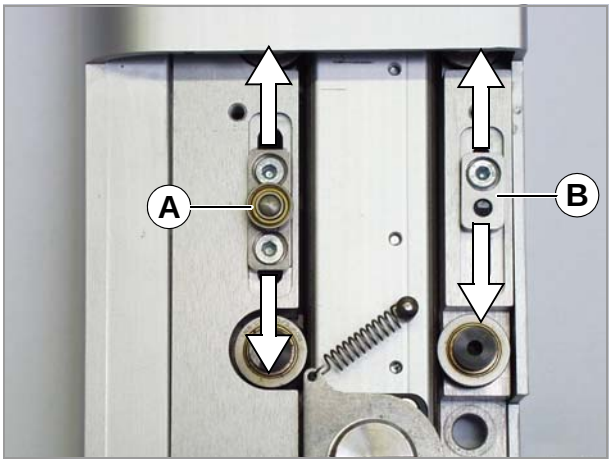
- Vertical: approx. 0.5 mm

  To adjust: Shifting of the right aluminium plate [5B]

  – upwards --> shifts the home position upwards.
  – downwards --> shifts the home position downwards.



[9] Applicator in home position.



[10] Adjusting the home position. Remove the gaiter to get to those aluminium plates.

Setting the Dispense Position

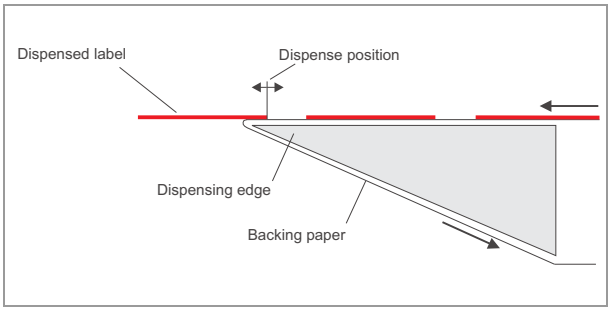
The label can either be dispensed so that it is entirely free from the carrier material, or it can remain adhering to the carrier material via a small strip when the feed stops [6].

The required width of this strip depends on the type of further processing and is set via a printer parameter.

➠ When using the applicator, the dispensing position should be set so that the label is just released when dispensed, i.e. so that it no longer adheres to the carrier material.

Advancing the carrier material too far can cause strings of adhesive to pull the label down with them.

Setting via the PRINT PARAMETERS > Dispenseposition parameter.



[11] Adjusting the dispense position.