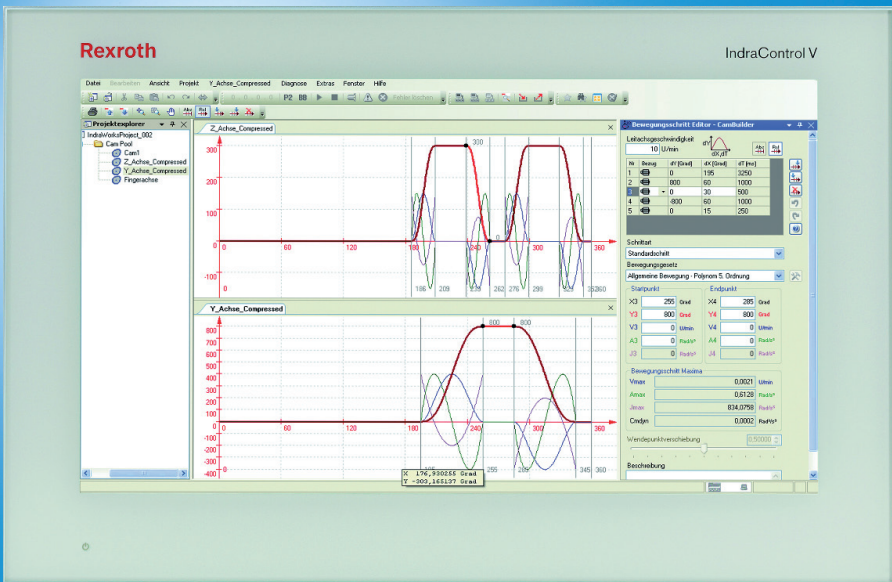


Rexroth IndraControl VPP 15.3 Multi Touch

Panel PC - Built-In Unit Rexroth

Operating Instructions
R911347269

Edition 01



Change Record

Edition	Release Date	Notes
Edition 01	2015-04	First edition

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Editorial Department

Development Automation Systems Control Hardware HB (KaWa/MePe)

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1 About this documentation

Overview on target groups and product phases

In the following illustration, the framed activities, product phases and target groups refer to the present documentation.

Example: In the product phase "Mounting (assembly/installation)", the "mechanic/electrician" can execute the activity "install" using this documentation.

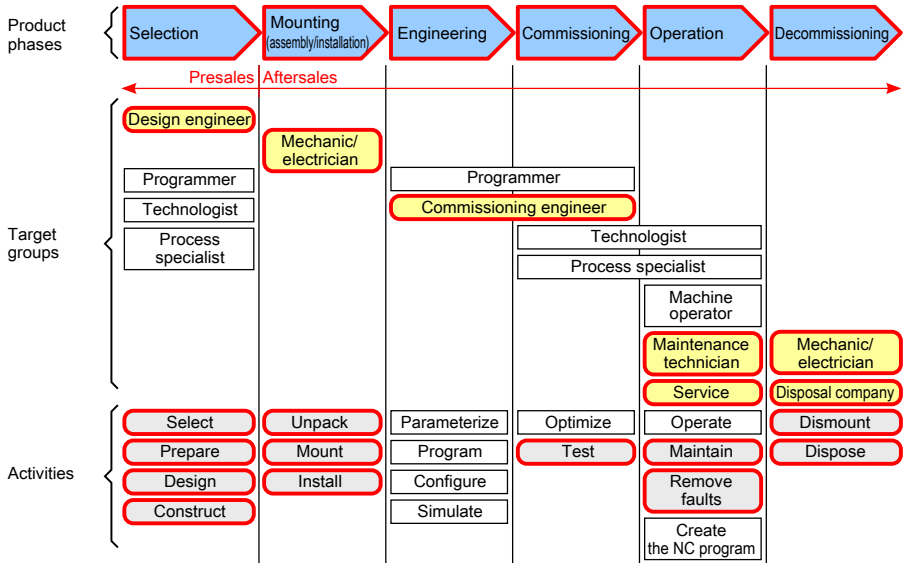


Fig. 1-1: Assigning the present documentation to the target groups, product phases and activities of the target group

Purpose

This document instructs the technical staff of the machine manufacturer on how to perform the mechanical and electrical installation safely and on how to commission the device.

Required qualifications: Individual who is able to assess the tasks assigned and identify possible safety risks owing to qualification in the subject, knowledge and experience. The individual should also be familiar with the standards and regulations.

Scope

This operating instruction applies to all PC-based machine operating and visualization terminal whose type codes starts with "VPP15.3...".

The type code specifications are located on the type plate of the device. Also refer to [chapter 2.1 "Product identification"](#) on page 2.

Related documents

Title	Parts number and document type
Rexroth IndraControl VAP 01 Power Supply Unit	R911339613 Operating Instructions
Rexroth IndraControl VAU 01.1 UPS with communication interface	R911336867 Operating Instructions
Rexroth IndraControl V-Devices Operating Systems	R911343901 Project Planning Manual

Tab. 1-1: Related documentation

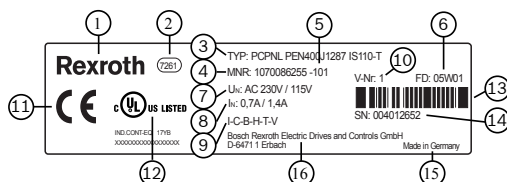
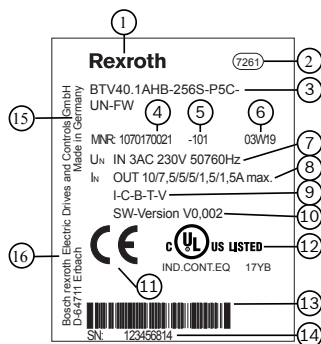
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2 Product identification and scope of delivery

2.1 Product identification

The type plate is located on the rear side or at the side of the device.



- 1 Logotype
- 2 Division or plant number
- 3 Type designation code (type code)
- 4 Parts number
- 5 State of revision
- 6 Date of manufacture (yyWwww)

- 7 Nominal voltage
- 8 Nominal current
- 9 Test marking
- 10 Version number
- 11 CE mark
- 12 Underwriters Laboratories Inc. mark

13 Serial number as barcode
14 Serial number

15 Designation of origin
16 Company address

Fig. 2-1: Exemplary type plates

2.2 Scope of delivery

- VPP 15.3 Multitouch
- Safety instructions
- Mounting kit
- 24 V female connector strip

3 Using safety instructions

3.1 Safety instructions – Structure

The safety instructions are structured as follows:

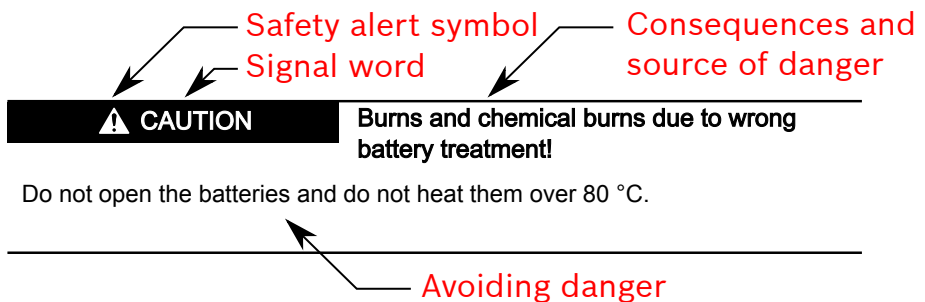


Fig. 3-1: Safety instructions – structure

3.2 Explaining signal words and safety alert symbol

The safety instructions in this documentation contain specific signal words (danger, warning, caution, notice) and, if necessary, a safety alert symbol (according to ANSI Z535.6-2006).

The signal word is used to draw attention to the safety instruction and also provides information on the severity of the hazard.

The safety alert symbol (a triangle with an exclamation point), which precedes the signal words danger, warning and caution is used to alert the reader to personal injury hazards.

⚠ DANGER

In the event of non-compliance with this safety instruction, death or serious injury **will** occur.

⚠ WARNING

In the event of non-compliance with this safety instruction, death or serious injury **will** occur.

⚠ CAUTION

In the event of non-compliance with this safety instruction, minor or moderate injury can occur.

NOTICE

In the event of non-compliance with this safety instruction, material damage can occur.

3.3 Symbols Used

Pointers are displayed as follows:



This is a note.

Tips are displayed as follows:



This is a tip.

4 Intended use

The Rexroth VPP 15.3 Multitouch is a PC-based machine operating and visualization terminal also meeting the control functionalities depending on the application or configuration. The VPP 15.3 Multitouch is intended for the following use cases:

- Operator terminals, visualization terminals and programming terminals with an integrated soft control in stand-alone machines
- Operator terminals, visualization terminals and programming terminals for connected IndraControl controls

NOTICE

Risk of damaging the device if not expressly stated accessories, mounting parts and other components, cables, and lines are used.

The VPP 15.3 Multitouch may be used only as intended and with the accessories, mounting parts and other components specified in this documentation. Components that are not expressly mentioned must neither be attached nor connected. The same applies to cables and lines.

Only to be operated with the component configurations and combinations expressly defined and with the software and firmware specified in the corresponding functional description.

Typical areas of application of the VPP 15.3 Multitouch are:

- Handling and assembly systems
- Packaging and food processing machines
- Printing and paper converting machines
- Machine tools
- Wood processing machines

The VPP 15.3 Multitouch may only be operated under the mounting and installation conditions, the position, and the ambient conditions (temperature, degree of protection, humidity, EMC etc.) specified in the related documentation.

NOTICE

Danger of destruction of the touch screen if operated with inappropriate objects.

Operate the touch screen only with your finger or with a touch pen.

5 Spare parts, accessories and wear parts

5.1 External 24 V power supply unit

Ordering code	Parts number	Description
VAP01.1H-W23-024-010-NN	R911171065	External 24 V power supply unit for the IndraControl V devices

Tab. 5-1: External 24 V Power Supply Unit

5.2 Uninterruptible power supply (UPS)

Ordering code	Parts number	Description
VAU01.1U-024-024-240-NN	R911171024	Uninterruptible power supply DC 24 V, 240 watts with USB interface

Tab. 5-2: Uninterruptible power supply (UPS)

Ordering code	Parts number	Description
RKB0050/001,0	R911172944	USB connecting cable with increased noise immunity; length 1 m
RKB0050/003,0	R911172945	USB connecting cable with increased noise immunity; length 3 m

Tab. 5-3: USB connection cable with high noise immunity for UPS

5.3 Wear parts

Wear parts are not subject to any warranty.

Backlight

The service life of the backlight is limited. After this period, the backlight will produce only 50 % of its original brightness. The service life is 50,000 hours if the surrounding air temperature is 25 °C:

CMOS battery

The service life of the CMOS battery is 5 to 7 years.

6 Ambient conditions

	In operation	Transport	Storage
Max. ambient temperature	+0 °C to +50 °C	-20 °C to +60 °C	-20 °C to +60 °C
Max. temperature gradient	Temporal temperature changes up to 3 K per minute	Temporal temperature changes up to 3 K per minute	Temporal temperature changes up to 3 K per minute

	In operation	Transport	Storage
Humidity	Min. relative humidity: 5 % Max. relative humidity: 85 % Min. absolute humidity: 1 g/m ³ Max. absolute humidity: 25 g/m ³ Condensation not al- lowed Corresponds to climatic class 3K3 acc. to EN 60721-3-3	Min. relative humidity: 5 % Max. relative humidity: 75 % Min. absolute humidity: 1 g/m ³ Max. absolute humidity: 25 g/m ³ Condensation not al- lowed Corresponds to climatic class 2K2 acc. to EN 60721-3-2	Min. relative humidity: 5 % Max. relative humidity: 85 % Min. absolute humidity: 1 g/m ³ Max. absolute humidity: 25 g/m ³ Condensation not al- lowed Corresponds to climatic class 1K2 acc. to EN 60721-3-1
Air pressure	Up to 3,000 m above sea level acc. to EN 61131-2	Up to 3,000 m above sea level acc. to EN 61131-2	Up to 3,000 m above sea level acc. to EN 61131-2
Mechanical strength	Max. vibration: Frequency range: 10 ... 150 Hz Excursion: 0.75 mm at 10 ... 57 Hz Acceleration: 1 g at 57 ... 150 Hz Acc. to EN 600068-2-6	Max. shock: 15 g 11 ms acc. to EN 60068-2-27, No malfunction	Max. shock: 15 g 11 ms acc. to EN 60068-2-27, No malfunction
Contamination level	2	2	2
Over-voltage category	2	-	-

Tab. 6-1: Ambient conditions



The ambient air must not contain acids, alkaline solutions, corrosive agents, salts, metal vapors and other electrically conductive contaminants in high concentrations.

The ambient air must be free of dust. Housing and installation compartments must at least comply with the degree of protection IP 54 acc. to DIN VDE 0470-1.



Not resistant to gas endangering the function (sulphur dioxide (SO₂), hydrogen sulphide (H₂S)).

7 Technical data

7.1 General technical data

VPP15.3GAK-4G0NN-D5D-HN-NN-FW

VPP15.3GIK-4G0NN-D5D-HN-NN-FW

Front	
Display	396 mm TFT (15") 1366 × 768 pixels 16.7 million colors
Operation	Multi touch
Surface of the front panel	Thermally tempered glass
Degree of protection	Device IP 65 acc. DIN EN 60 529 Front type 1 acc. to NEMA (UL)
PC box	
Processor	Core i7-620M, 2,66 GHz, 4 MB L2 Cache
Working memory (RAM)	4096 MB
Hard disk	At least 100 GB solid state disk (SSD) 2.5"
Voltage supply	DC 24 V (use a 24 V power supply unit acc. to DIN EN 60742, classification VDE 0551, for example the VAP01.1H-W23-024-010-NN, parts number R911171065)
Slots	1 × PCI
USB ports	6 × USB 2.0 Per USB port max. 500 mA, total current at all USB ports max. 1 A.
Ethernet Interfaces	2 × RJ45, female connector, 8-pin
VGA interface	1 x HD female connector, 15-pin
Current consumption	max. 5 A
Power loss	max. 120 W
Weight	Approx. 7.5 kg

Tab. 7-1: Technical data of the VPP 15.3 Multitouch

7.2 Optical characteristic values

7.2.1 TFT

The maximum permissible number and type of pixel errors of TFT displays depends on the manufacturer and is defined by the respective "incoming inspection" of the manufacturer. This "incoming inspection" is provided by the Bosch Rexroth service if required.

The maximum brightness and color characteristics of TFT displays depends on the manufacturer and is defined by the respective specification of the manufacturer.

7.2.2 Input system (multi-touch front)

The maximum permissible number and type of defects on the front or the glass, such as trapped dust, scratches, etc. is defined in the FT¹⁾. The VPP multi-touch devices meet the quality guideline.

8 Standards

8.1 General information

The products have been developed according to the current German edition of the standards at the time of product development.

8.2 Standards used

Standard	Significance
EN 60 204-1	Safety of machinery - Electrical equipment of machines
EN 61 000-6-4	Generic standards - Emission standard (industrial environments)
EN 61 000-6-2	Generic standards – Noise immunity (industrial environments)
EN 61 558-2-6	Transformer for 24 V power supply unit, safe separation
EN 60 664-1	Overvoltage category II
EN 61 131-2	24 V output requirements
EN 61 131-2	24 V current supply requirements
EN 60 529	Degrees of protection (including housings and installation compartments)
EN 60 068-2-6	Vibration test
EN 60 068-2-27	Shock test
EN 60 721-3-1 and	Climatic class
EN 60 721-3-3	
IEC 60204-1	Safety of machinery – Electrical equipment of machines

Tab. 8-1: Standards used

1) *Quality standard (version December 2013) of the Fachgemeinschaft Eingabesysteme (German association for input systems).*

8.3 CE marking

8.3.1 Declaration of conformity



The electronic products described in the present operating instructions comply with the requirements and the target of the following EU directive and with the following harmonized European standards:

EMC Directive 2004/108/EC

The electronic products described in the present operating instructions are intended for use in industrial environments and comply with the following requirements:

Standard	Title	Edition
DIN EN 61000-6-4 (VDE 0839-6-4)	Electromagnetic compatibility (EMC) Part 6-4: Generic standards – Emission standard for industrial environments (IEC 61000-6-4:2006)	September 2007
DIN EN 61000-6-2 (VDE 0839-6-2)	Electromagnetic compatibility (EMC) Part 6-2: Generic standards – Noise immunity for industrial environments (IEC 61000-6-2:2005)	March 2006

Tab. 8-2: Standards for electromagnetic compatibility (EMC)



Non-compliance with CE conformity due to modifications at the device.

The CE marking is only valid for the device in its delivery state. After modifying the device, verify CE conformity.

8.4 UL/CSA certified



The devices are certified according to

- **UL508** (Industrial Control Equipment) and
- **C22.2 No. 142-M1987** (CSA)

UL file no. E210730

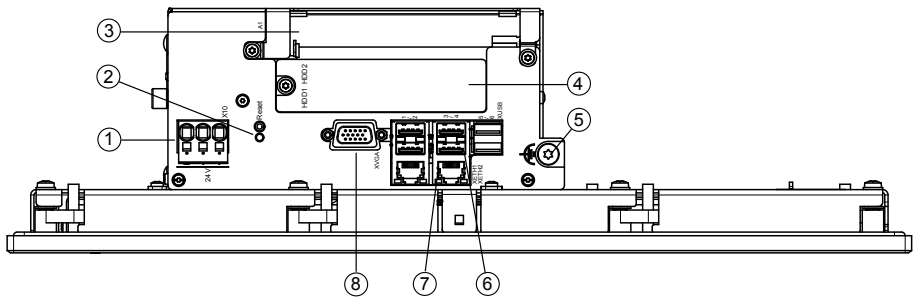
However, there can be combinations or extension stages with a limited or missing certification. Thus, verify the registration according to the UL marking on the device.

**Loss of UL/CSA conformity due to modifications at the device.**

UL and CSA marking applies only to the device in its delivery state. After modifying the device, UL conformity and CSA conformity are to be verified.

9 Interfaces

9.1 Position of the connections



- | | |
|------------------------------|------------------------------------|
| ① DC 24 V voltage supply | ⑤ Connection functional earth (FE) |
| ② Reset button and reset LED | ⑥ 6 × USB |
| ③ PCI additional slot | ⑦ 2 × Ethernet |
| ④ Carrier plate hard disk(s) | ⑧ Monitor connection (VGA) |

Fig. 9-1: Connection position

9.2 Interfaces

9.2.1 General information

General Information

NOTICE**Malfunctions due to insufficient shielding!**

Use only shielded cables as well as metallic, conductive connectors or coupling housings with large-area shield support.

9.2.2 Overview

Interfaces – overview

The following connections are available at the VPP 15.3 Multitouch:

Labeling of the housing	Connection type	Connection type on the device (integrated)	Mating connector or cable (from outside)
X10	PC supply voltage DC 24 V	Connector strip PC 4/ 3-G-7.62	Spring terminal SPC 5/3-ST-7.62 plugged in
XUSB1 to 6	USB interfaces	USB female connector, 4-pin, type A	USB connector, 4-pin,
XETH1, XETH2	Ethernet interfaces 10/100/1000 MBit/s	RJ45 female connector, 8-pin	RJ45 connector (twisted pair, 8-wire)
XVGA	Connection external monitor	HD female connector, 15-pin	HD connector, 15-pin

Tab. 9-1: Interfaces at the VPP 15.3 Multitouch

9.2.3 PC voltage supply

X10 – 24 V DC supply voltage

All voltages internally required are generated via a DC/DC converter without any electrical isolation. The connection is designed as spring terminal SPC 5/3-ST-7.62, 3-pin, pin spacing 7.62 mm. Cables with conductor cross-sections listed in table [tab. 9-2 "Permissible conductor cross-sections" on page 13](#) can be connected to the voltage supply connection.

NOTICE

Insufficient contact and loss of UL certification if no copper wire is used.

Use only copper wire for wiring the connection terminals.

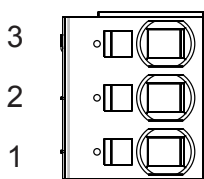


Fig. 9-2: DC 24 V connection, X10, pin assignment

Pin	Labeling	Function
1	+	Supply voltage 24 V
2	-	0 V supply voltage
3	U	Supply voltage before UPS available (see chapter 9.4 "Connecting an UPS" on page 18)

NOTICE

Malfunction of the UPS with communication interface if X10/pin 3 is wired.

The X10/Pin 3 of the VPP 15.3 Multitouch may only be wired if a UPS without communication interface is used (see [chapter 9.4.2 "UPS without USB communication interface"](#) on page 20).

⚠ WARNING

Polarity reversal of the X10 connector can destroy the device (fire danger), if there is no additional external protection (fire hazard).

Ensure that the polarity at the X10 connector and the dimensioning of the fuse are correct.

Conductor	Cross-section
Conductor cross-section inflexible min.	0.2 mm ²
Conductor cross-section inflexible max.	10 mm ²
Conductor cross-section flexible min.	0.2 mm ²
Conductor cross-section flexible max.	6 mm ²
Conductor cross-section flexible with wire end sleeves without plastic sleeve min.	0.25 mm ²
Conductor cross-section flexible with wire end sleeves without plastic sleeve max.	6 mm ²
Conductor cross-section flexible with wire end sleeves with plastic sleeve min.	0.25 mm ²
Conductor cross-section flexible with wire end sleeves with plastic sleeve max.	4 mm ²
Conductor cross-section AWG/kcmil min.	24
Conductor cross-section AWG/kcmil max.	8
2 conductors with the same cross-section, flexible with TWIN-AEH with plastic sleeve min.	0.25 mm ²
2 conductors with the same cross-section, flexible with TWIN-AEH with plastic sleeve max.	1.5 mm ²

Tab. 9-2: Permissible conductor cross-sections

Parameter	Value
Rated voltage U_N	24 V DC
Emitted interference and surge immunity	$U_{max} = 35 \text{ V}$ (for $t < 100 \text{ ms}$)

Parameter	Value
Current consumption for U_N	max. 5 A
Reverse voltage protection	By input diode

Tab. 9-3: Technical data DC 24 V connection



DANGER

Danger without safe separation!

The DC 24 V input voltage must comply with the requirements of the "Protective separation"!

Plug and remove the plug connection only if there is no voltage!

9.2.4 USB interfaces

XUSB1 to 6 – Serial interfaces for printer, scanner, drive

Six standard USB 2.0 interfaces with 480 MBit/s are available at the devices.



The device switches off if the total power consumption is exceeded.

The max. power consumption of one USB connector must not exceed 500 mA. The maximum simultaneous power consumption of all USB ports is 3 A. The max. power consumption of all USB ports is **reduced** if further 5 V devices are added (e.g. PCI plug-in boards). The maximum total current must not exceed 1 A on all USB ports to avoid that the power supply unit switches off under the allowed operation conditions.



USB devices (e.g. keyboard) switch off if the total power consumption is exceeded.

The max. power consumption of one USB connector must not exceed 500 mA.

If the max. power consumption is exceeded, a message displays that the USB devices are disabled. The USB devices are enabled as soon as the power consumption of one USB connector is below 500 mA. Furthermore, the USB error message is to be confirmed manually in the taskbar, and the USB port is to be reset.

Observe that USB connectors 1 and 2, 3 and 4 as well as 5 and 6 are monitored for overcurrent in pairs. Example: If the power consumption of USB connector 1 exceeds 500 mA, also USB connector 2 is switched off.

NOTICE

The PC can switch off if incorrect USB devices are connected.

Only connect USB devices which comply with the surge immunity according to the EMC Directive (industrial environments).

NOTICE

Malfunctions of the USB 2.0 connection if USB cables longer than 3 m are used.

The max. USB cable length of 3 m must not be exceeded for the USB 2.0 cables!

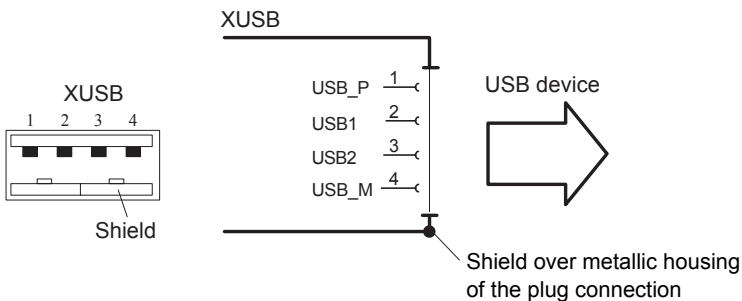


Fig. 9-3: USB interfaces XUSB1 to XUSB6

Pin	Function
1	USB power supply (max. 500 mA)
2	Data -
3	Data +
4	USB ground

Tab. 9-4: Pin assignment of the USB interface

9.2.5 Ethernet interfaces

XETH1, XETH2 – Network connection (Ethernet)

The VPP 15.3 Multitouch can be connected to an Ethernet network via the Ethernet interfaces.

The LAN assignment to the XLAN devices at the device is set as default as follows:

Labeling in Windows XP/Windows 7	Labeling at the device
Local Area Connection	XLAN1
Local Area Connection 2	XLAN2

Tab. 9-5: Assignment of the LAN interfaces in the operating system to the interfaces at the device

RJ45, female connector, 8-pin	
Type	Ethernet 10Base T / 100Base X / 1000Base T
Cable length	Maximum 100 m
Transmission rate	10, 100, 1000 MBit/s

For direct connection of two devices, crossover-cables are not mandatory because the VPP 15.3 Multitouch switches over automatically ("automatic cross-over cable detection").

Ethernet RJ45

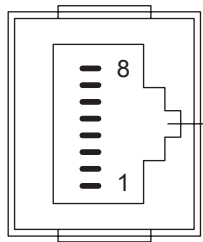


Fig. 9-4: Ethernet interfaces XETH1/2

The driver configuration of the network connection can be called up in the task bar or in the "Control Panel" by using the **Network connections** icon. Set in the control panel whether the data is transferred with 10 Mbit/s, 100 Mbit/s or 1 Gbit/s via the network or via autonegotiation.

NOTICE

No or incorrect network data transmission if the data rate is set manually!

Observe that the network board of the remote station has to be able to process the same data transmission rate.

9.2.6 VGA interfaces

XVGA – Connection external monitor

An external monitor can be connected to the VGA connection (XVGA) and can be operated parallel to the integrated flat screen via the integrated video adapter.

NOTICE

No display of BIOS messages on the external monitor if the monitor has been connected first after switching on the VPP 15.3 Multitouch.

Connect the monitor already "before" switching on the VPP 15.3 Multitouch.

HD female connector, 15-pin	
Cable length	Max. 1.5 m
Cable type	Shielded, cross-section min. 0.14 mm ²
Max. resolution	1600 x 1200 pixels, 4294 mill. colors max.

Tab. 9-6: VGA Interface XVGA

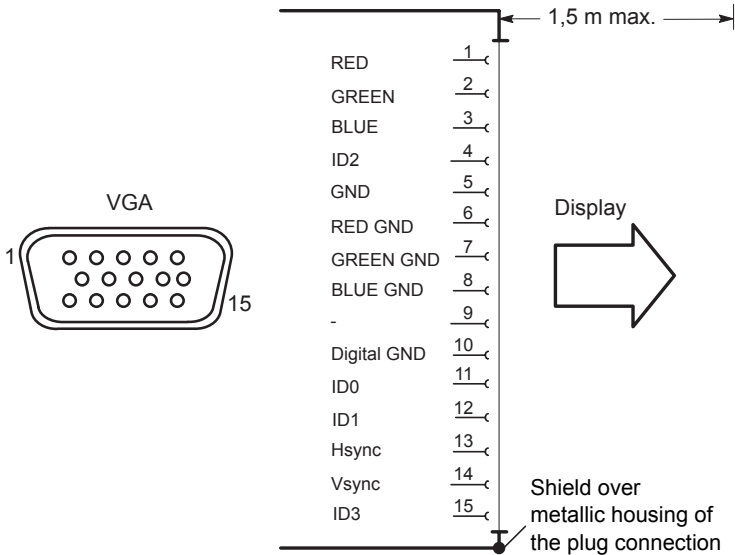


Fig. 9-5: XVGA interface



Upon delivery, the settings of the VPP 15.3 Multitouch allow to trigger a connected monitor as well as the VPP 15.3 Multitouch.

Select whether display, external monitor or both are addressed as follows:

- Click on the icon of the graphics driver in the taskbar and select "Graphics Properties". Select the setting "Clone Displays" in the open window "Multiple Displays" under "Operating Mode" and press **OK**.



Fig. 9-6: Graphics driver icon in the task bar

Example:

If the screen output should be performed simultaneously on both monitors, select **Clone Displays**.

If the connected external monitor or the display of the VPP 15.3 Multitouch is black, as the corresponding display is not activated, the action can be selected using shortcuts:

- <CTRL><ALT><F1>: Switch on external monitor
- <CTRL><ALT><F4>: Switch on display of the VPP 15.3 Multitouch

The shortcuts can only be activated if a user is logged in!

NOTICE

Wrong settings of resolution and color may destroy the monitor!

Observe the technical data of the monitor and adapt the operating system parameters accordingly.

9.3 Reset button and Reset LED

A reset button and a reset LED are located on the upper side of the PC box (see [fig. 9-1 "Connection position" on page 11](#)). The VPP 15.3 Multitouch carries out a cold start after pressing the button. The LED lights as long as the button is pressed.

9.4 Connecting an UPS

9.4.1 UPS with USB communication interface

While connecting a UPS with USB interface is connected to the VPP 15.3 Multitouch, the information regarding the existence as well as the state of the UPS

are communicated to the VPP 15.3 Multitouch via a USB connection. The X10/Pin 3 of the VPP 15.3 Multitouch remains unwired.

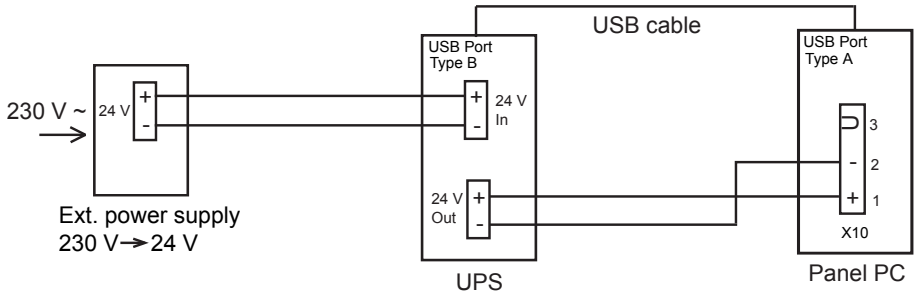
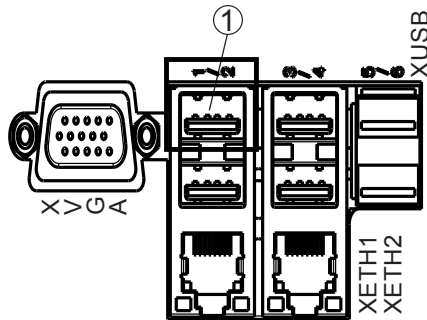


Fig. 9-7: UPS with communication (via USB) to the VPP 15.3 Multitouch

A virtual COM interface, which is provided by a USB interface, establishes the communication. The USB connection XUSB2 has already been configured for the UPS connection when shipped.



① Standard connection for the UPS

Fig. 9-8: Connecting the UPS to the XUSB2 USB connection



The driver is installed after the first connection of the UPS via the USB cable. A virtual COMn (e.g. COM3) interface is created in the operating system.

NOTICE

No UPS function for firmware version 01VRS and modified USB interface.

There is a defined assignment of the UPS to the USB interface for firmware version 01VRS.

9.4.2 UPS without USB communication interface

To identify the connection of this UPS with the help of the power pack electronics in the VPP 15.3 Multitouch, the +24 V voltage (+24V In) that - applied to the UPS input - is to be connected to Pin 3 of the X10 (U) of the VPP 15.3 Multitouch.

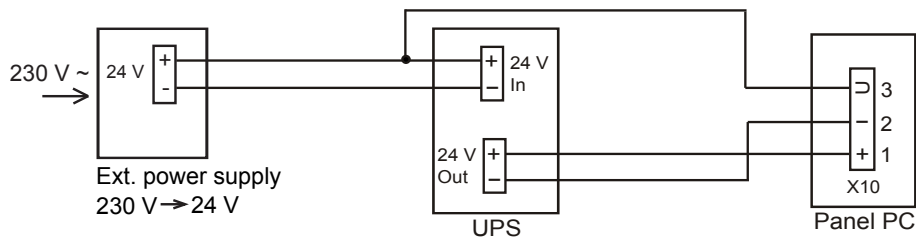


Fig. 9-9: Connecting an external UPS without communication to the VPP 15.3 Multitouch

10 Mounting, demounting and electric installation

10.1 Housing dimensions



All dimensions in millimeters.



① Visual range of the display

Fig. 10-1: Front view

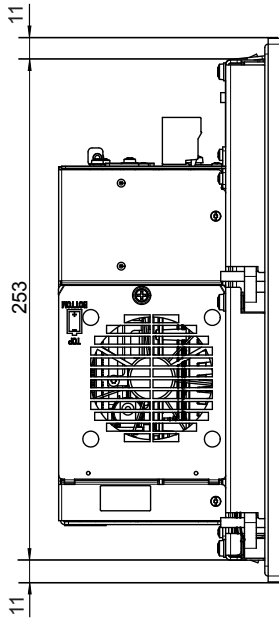


Fig. 10-2: Side view

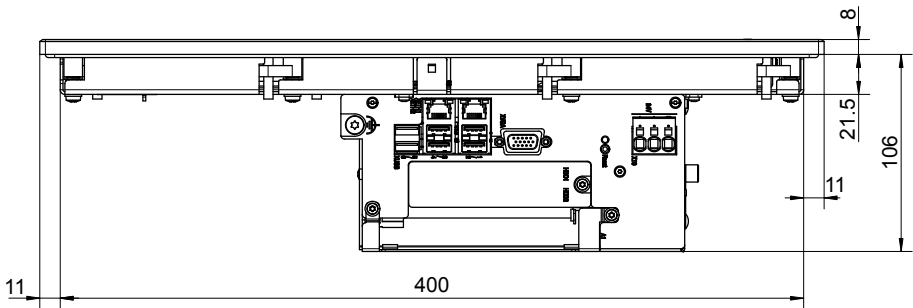


Fig. 10-3: Top view

10.2 Installation notes

- Provide a space of 50 mm on all sides of the device for sufficient cooling and cable routing
- The LED display on the operator panel must not be covered.
- Wire all cables in loops. Use strain reliefs for all cables
- Only install the VPP 15.3 Multitouch vertically, with a max. deviation of $\pm 45^\circ$, measured from the vertical

10.3 Mounting

Mount the VPP 15.3 Multitouch as follows:



Loss of degree of protection IP 65!

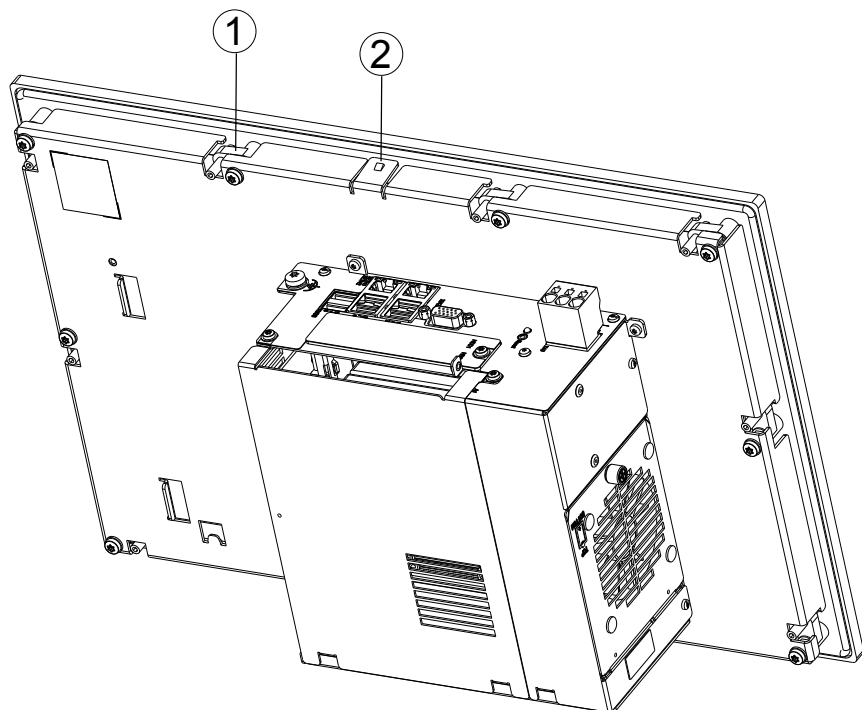
The housing, in which the VPP 15.3 Multitouch is installed, has to fulfill the following conditions:

- Free from impurities
- Sufficient mechanical strength and flatness

These criteria influence the required degree of protection IP to a great extent.

Further required measures are to be taken depending on the mounting location, e. g. the stabilization of the mounting frame.

1. Creating a mounting cut-out, see [fig. 10-6 "Fitting dimensions"](#) on page 25.
2. Insert the VPP 15.3 Multitouch from the front into the cut-out until the latching lug at the top of the device latches in the cut-out.



- ① Clamp fastenings
- ② Latching lug

Fig. 10-4: Position of clamp fastenings

3. Fold out the clamp fastenings.

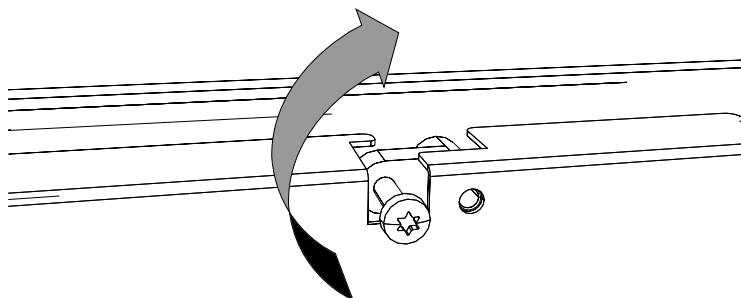


Fig. 10-5: Clamp fastening

4. Tighten the clamping screws.

NOTICE

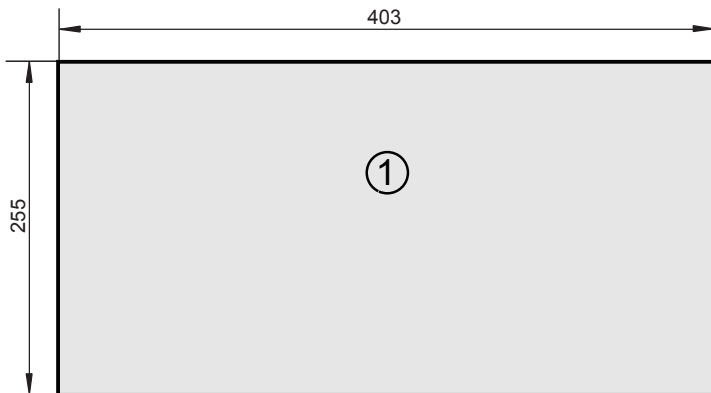
Damage of the mechanics caused by wrong tightening torque.

Tighten the screws and nuts with the corresponding torque according to the following table.

Threads	Mounting torque
M2,5	0.4 Nm
M3	0.7 Nm
M4	2.0 Nm
M5	2.8 Nm

Tab. 10-1: Mounting torques

10.4 Mounting dimensions of the VPP 15.3 Multitouch



① Mounting cut-out

Fig. 10-6: Fitting dimensions

10.5 Demounting

1. Disconnect the VPP 15.3 Multitouch.
2. Remove all connected cables.
3. Loosen the screws of the clamp fastenings.
4. Fold the clamp fastenings.
5. Press the latching lug of the installation aid.

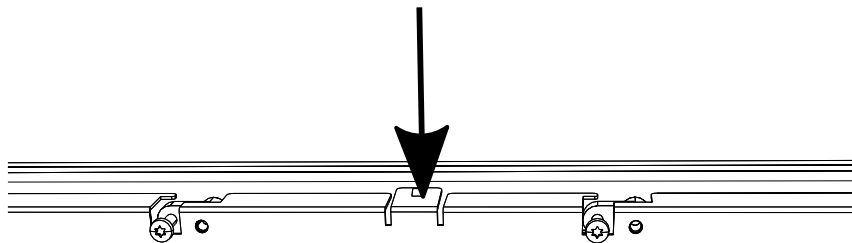


Fig. 10-7: Latching lug

6. Remove the VPP 15.3 Multitouch from the mounting frame.

10.6 Electric connection

10.6.1 Connect VPP 15.3 Multitouch to 24 V voltage supply

Connection diagram

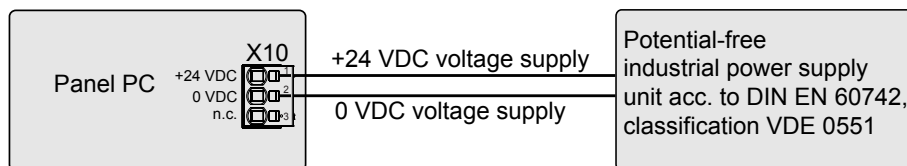


Fig. 10-8: Cabling power supply unit to VPP 15.3 Multitouch

Connection

1. Connect the functional earth.



2. Connect "X10" for the 24 V voltage supply to the industrial power unit.

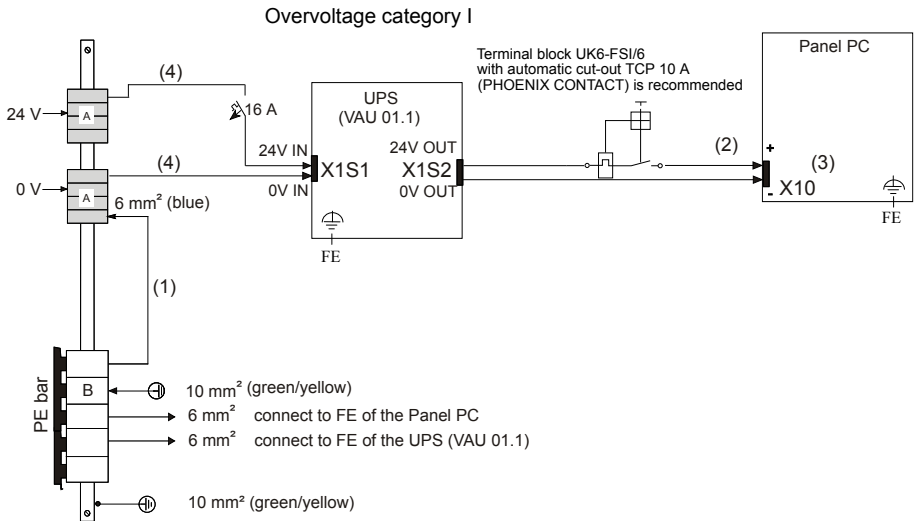
Use a 24 V industrial power supply unit acc. to DIN EN 60742, classification VDE 0551, for example "VAP01.1H-W23-024-010-NN" (parts number R911171065) for the voltage supply.

NOTICE

In case of greater distances between the VPP 15.3 Multitouch and the power supply unit, equalizing currents may flow when using a non-isolated power supply unit as pin 2 is internally connected in the VPP 15.3 Multitouch to the housing.

In this case, use an isolated power supply unit.

10.6.2 Connection diagram when using a UPS



- A** Terminal block 4 mm²
- B** Serial terminal 10 mm²
- ① Easy to remove and visible
- ② Cable length between UPS and VPP 15.3 Multitouch is max. 2 m at a cross-section of min. 2.5 mm².
- ③ Polarity reversal of the X10 plugs can destroy the operator terminal if there is no

additional external protection (fire hazard). The reason is a simultaneous grounding of the 0 V in the device and of the 0 V (PELV) (1).

- ④ Cable length between +24 V power supply unit and UPS is max. 2 m at a cross-section of min. 5 mm² (see documentation of the VAU01.1 UPS)

Fig. 10-9: Total connection scheme with power supply unit, UPS and VPP 15.3 Multitouch



Generating 24 V is described in the operating instructions "Rexroth IndraControl VAP 01.1 Power Supply Unit" parts no. R911339612).

11 Commissioning

The product can be used directly. No configuration is required.

12 Device description

12.1 General information


Depending on the operation (glove or finger), the multi-touch configuration is different. Different parameter sets (standard, glove and extreme EMC-loaded operation) of the multi-touch controller can be loaded using the IPC maintenance tool. For special use cases, contact the Bosch Rexroth service.



Fig. 12-1: Front view

12.2 Operating and error displays

An LED for the operating display is located in the lower left part of the front panel.

Symbol, LED	Display	Significance	Action
 Power	LED green	Normal operation	–
	LED off	No supply voltage of 24 V DC	Check supply voltage

Tab. 12-1: LED for operating and error display on the front panel

13 Error causes and troubleshooting

For information on the error display on the front panel, refer to [chapter 12.2 "Operating and error displays" on page 28](#).

Error	Troubleshooting
No image visible	<ul style="list-style-type: none"> ● Connect the voltage supply, check X10 connection ● Checking settings of the graphics driver (see chapter 9.2.6 "VGA interfaces" on page 16)
Distorted display due to incorrect display resolution	<ul style="list-style-type: none"> ● Set the correct display resolution in the graphics driver ● Restart VPP 15.3 Multitouch

Tab. 13-1: Error causes and troubleshooting

14 Maintenance

14.1 General information

NOTICE

Loss of IP degree of protection due to incorrect maintenance.

Ensure the IP degree of protection during maintenance!

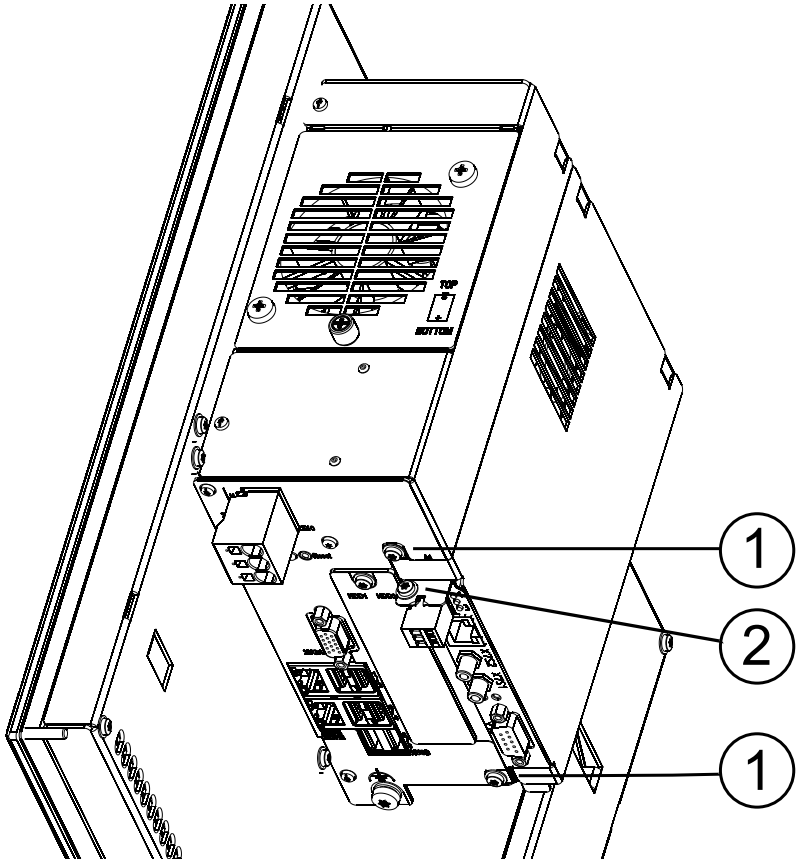
14.2 Display

The backlight is subject to wear, see [chapter 5.3 "Wear parts" on page 6](#).

A fading backlight causes a progressive deterioration display readability. Thus, a replacement is necessary. For further information, please contact the Bosch Rexroth Service.

14.3 Installing extension cards

1. Switch off the supply voltage.
2. Wait until the power supply unit switches off automatically after the UPS operation (the UPS LED on the connector panel of the VPP 15.3 Multitouch flashes red until the UPS switches off the power supply unit). If required, unplug all connectors from the VPP 15.3 Multitouch.
3. Remove the housing cover on the rear side. Therefore, both fastening screws on the upper surface have to be removed, see [fig. 14-1 "Position of the housing cover and the fastening screws" on page 30](#).



- ① Fastening screw of the housing cover
- ② Fastening screw of the slot cover

Fig. 14-1: Position of the housing cover and the fastening screws

4. Remove the fastening screw of the slot cover. Then remove the slot cover.
5. Place the extension card and fix it using a fastening screw. Ensure that the card fits into the PCI slot.
6. Mount the housing cover again.

If the card is equipped with a Plug and Play (PnP) function, the card is automatically recognized by the operating system and integrated into the system, provided that there are no hardware conflicts (IRQ etc.) with other extension cards or connected devices.

Possible causes for missing functions

There can be different causes if functions, which are based on the new card, are not available after the system reboot:

- The card is not correctly positioned in the PCI slot
- The driver software of the card is not or incorrectly installed
- IRQ (Interrupt) conflict with other hardware components of the panel PC
- The software of the card was not installed

NOTICE

No screen output on the LCD display if an other graphics controller is used.

When inserting an additional or another graphics controller, observe the following:

The device uses, as preset, the integrated graphics controller. If an additional or another graphics controller is used as PCI card, adjust the corresponding settings in the BIOS and in the operating system.

14.4 CMOS battery

The battery used for buffer the PC clock has a limited service life (see "[CMOS battery](#)" on page 6).

The user must not exchange this lithium battery. The battery may only be exchanged by the Bosch Rexroth Service (see [chapter 17 "Service and support" on page 35](#)) or by personnel trained and authorized by the Service. The position of the lithium battery on the SATA bus board (backplane) is illustrated in [fig. 14-2 "Fan tray" on page 32](#).

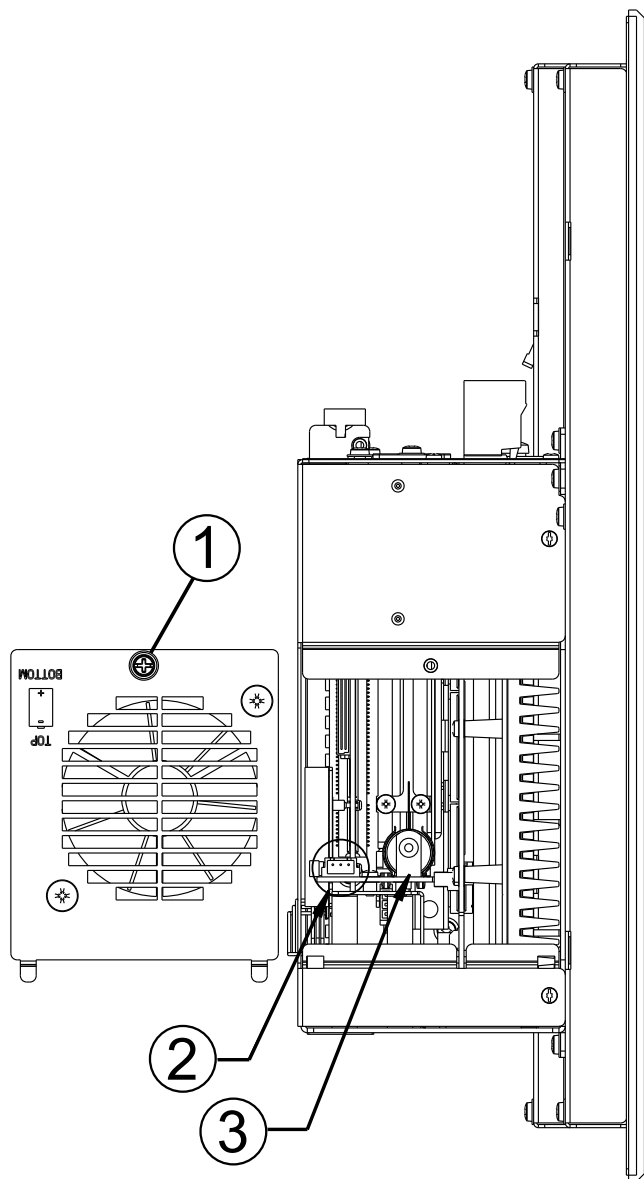
⚠ WARNING

Batteries can cause fire, explosions or chemical burn.

Do not load, remove, destroy, burn or heat batteries over 100 °C. Dispose old batteries immediately and properly. Keep away from children!

14.5 Fan

The fan is located on the left side of the PC box. The fan (including the fan cover) can be removed by loosening the thumbscrew. When exchanging the fan, the plug of the fan cable on the SATA bus board (backplane) (refer to ② in the following figure) has to be removed as well.



- ① Thumbscrew fan tray
- ② Fan plug connection on the SATA bus board (backplane)

- ③ CMOS battery on the SATA bus board (backplane)

Fig. 14-2: Fan tray

When closing the fan cover, do observe that no cables are clamped.

14.6 Cleaning notes

NOTICE**Dissolving front glass sealing with solvent!**

- Do not use solvents
- Do not use high pressure cleaning device

14.7 Regular maintenance tasks

- Check all plug and terminal connections of the components for proper tightness and possible damage at least once a year
- Check that no cables are broken or pinched
- Replace damaged parts immediately

15 Ordering information

15.1 Accessories and spare parts

For ordering information on accessories and spare parts, refer to [chapter 5 "Spare parts, accessories and wear parts"](#) on page 5.

15.2 Type code

Abbrev. column	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	20	1	2	3	4	5	6	7	8	9	30	1	2	3
Example:	V	P	P	1	5	.	3	G	A	K	-	2	G	0	N	N	-	D	5	D	-	D	N	-	N	N	-	F	W				
Product	VPP..... = VPP																																
Line	15..... = 15																																
Design	3..... = 3																																
Front panel and display																																	
Rexroth design																																	
15,6", Multitouch..... = GA																																	
15,6", Multitouch vertical..... = GI																																	
Customized design																																	
Bosch 15,6", Multitouch..... = CL																																	
PC box¹⁾																																	
1 slot, 1 x PCI..... = K																																	
2 slots, 2 x PCI..... = L																																	
4 slots, 4 x PCI..... = M																																	
2 slots, 1 x PCI + 1 x PCIe..... = N																																	
4 slots, 2 x PCI + 2 x PCIe..... = Q																																	
4 slots, 4 x PCIe..... = R																																	
Memory capacity (RAM)²⁾																																	
2048 MB..... = 2G0																																	
4096 MB..... = 4G0																																	
8192 MB..... = 8G0																																	
Interface																																	
Without special interface..... = NN																																	
System configuration																																	
Celeron P4500, 1,86 GHz, 2 MB L2 Cache..... = C3																																	
Core i5-520M, 2,4 GHz, 3 MB L2 Cache..... = D4																																	
Core i7-620M, 2,66 GHz, 4 MB, L2 Cache..... = D5																																	
Core i7-3612QE, 2,1 GHz, 6 MB L2 Cache..... = D6																																	
Supply voltage																																	
DC 24 V..... = D																																	
Hard disk (HD)³⁾																																	
2,5", min. 320 GB..... = D																																	
2,5", min. 320 GB (2x HDD in RAID 1)..... = E																																	
2,5", min. 100 GB, Solid State Disk (SSD)..... = H																																	
Drive⁴⁾																																	
Without..... = N																																	
DVD ±RW..... = E																																	
Other design																																	
None..... = NN																																	
Firmware and software																																	
Denotes that firmware and software must be ordered as separate sub position = FW																																	

- Notes:** 1) PC box „K“ and „N“ is only available with drive „N“
 2) Memory capacity "2G0" is only available with system configuration "C3" and "D4"
 Memory capacity "4G0" is only available with system configuration "D4" and "D5"
 Memory capacity "8G0" is only available with system configuration "D6"
 3) Hard disk (HD) "E" is only available with system configuration "D4" and "D5"
 4) Drive "E" is only available with PC box "L", "M", "Q" and "R"

Fig. 15-1: Type designation code VPP 15.3 Multitouch

16 Disposal

16.1 Return

For disposal, our products can be returned free of charge. However, the products must be free of remains like oil and grease or other impurities.

Furthermore, the products returned for disposal must not contain any undue foreign substances or components.

Send the products free of charge to the following address:

Bosch Rexroth AG
Electric Drives and Controls
Bürgermeister-Dr.-Nebel-Straße 2
D-97816 Lohr am Main, Germany

16.2 Packaging

The packaging material consists of cardboard, plastics, wood or styrofoam. Packaging material can be recycled anywhere.

For ecological reasons, please do not return empty packages to Bosch Rexroth.

17 Service and support

Our worldwide service network provides an optimized and efficient support. Our experts offer you advice and assistance should you have any queries. You can contact us **24/7**.

Service Germany

Our technology-oriented Competence Center in Lohr, Germany, is responsible for all your service-related queries for electric drive and controls.

Contact the **Service Hotline** and **Service Helpdesk** under:

Phone: **+49 9352 40 5060**
Fax: **+49 9352 18 4941**
E-mail: service.svc@boschrexroth.de
Internet: <http://www.boschrexroth.com/>

Additional information on service, repair (e.g. delivery addresses) and training can be found on our internet sites.

Service worldwide

Outside Germany, please contact your local service office first. For hotline numbers, refer to the sales office addresses on the internet.

Preparing information

To be able to help you more quickly and efficiently, please have the following information ready:

- Detailed description of malfunction and circumstances
- Type plate specifications of the affected products, in particular type codes and serial numbers
- Your contact data (phone and fax number as well as your e-mail address)

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Notes

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