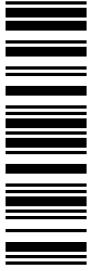
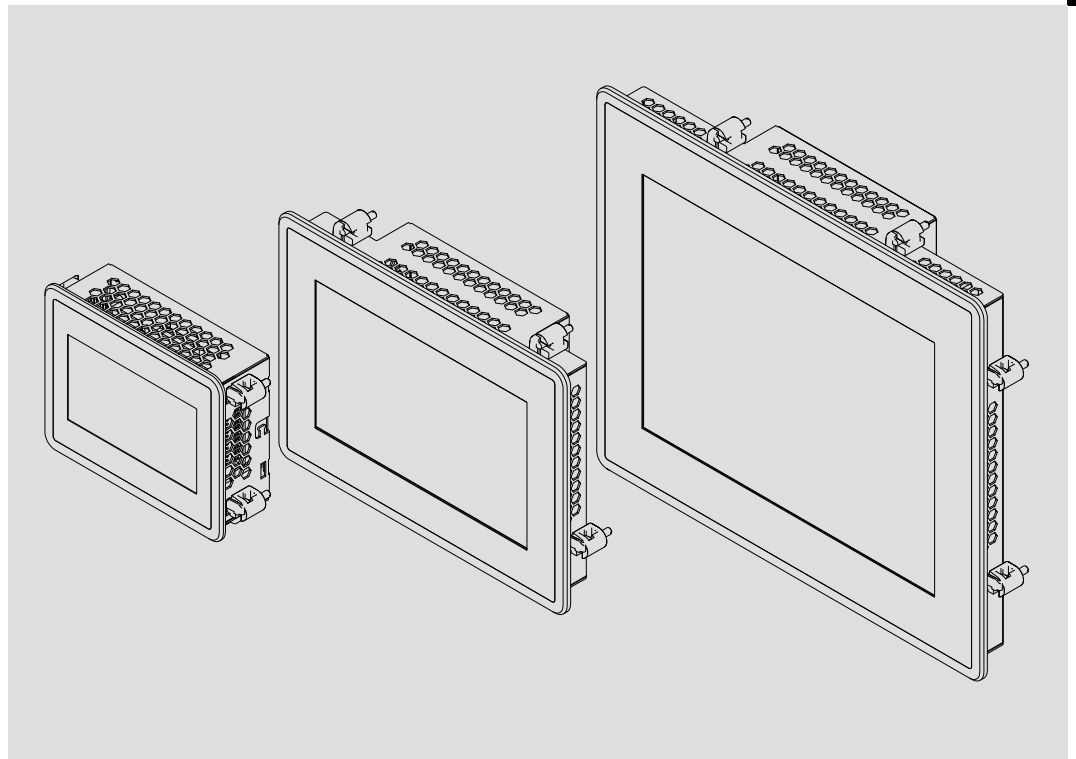


L-force Controls



Operating Instructions

p300 10.9 ... 26.4 cm



P30GAP..., P30GAH...

Panel Controller, HMI



Please read these instructions before you start working!
Follow the enclosed safety instructions.



Tip!

Information and auxiliary devices related to the Lenze products can be found in the download area at

<http://www.Lenze.com>

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1 About this documentation

Contents

This documentation contains some information relating to the intended use of the Panel Controller in the context of the "Controller-based Automation" system.

The present operating instructions are part of the "Controller-based Automation" manual collection. Further documents with regard to system components can be obtained via download.

Target group

This documentation is directed at qualified skilled personnel according to IEC 60364.

Qualified skilled personnel are persons who have the required qualifications to carry out all activities involved in installing, mounting, commissioning, and operating the product.

Validity

These instructions are valid for

- ▶ Panel Controller p300
- ▶ HMI p300

1.1 Document history

Material number	Version			Description
13462749	1.1	07/2014	TD15	corrected: torque for mounting 10.9 cm (4.3 ")
13462749	1.0	04/2014	TD15	First edition

1 About this documentation

Conventions used

1.2 Conventions used

This documentation uses the following conventions to distinguish between different types of information:

Spelling of numbers

Decimal separator	Point	In general, the decimal point is used. For instance: 1234.56
-------------------	-------	---



Warnings

UL warnings		Given in English and French
UR warnings		

Text

Program name	» «	PC software For example: »Engineer«, »Global Drive Control« (GDC)
--------------	-----	--

Icons

Page reference		Reference to another page with additional information For instance:  16 = see page 16
Documentation reference		Reference to another documentation with additional information For example:  EDKxxx = see documentation EDKxxx

1.3 Notes used

The following pictographs and signal words are used in this documentation to indicate dangers and important information:

Safety instructions

Structure of safety instructions:



Danger!

(characterises the type and severity of danger)

Note

(describes the danger and gives information about how to prevent dangerous situations)

Pictograph and signal word	Meaning
Danger!	Danger of personal injury through dangerous electrical voltage. Reference to an imminent danger that may result in death or serious personal injury if the corresponding measures are not taken.
Danger!	Danger of personal injury through a general source of danger. Reference to an imminent danger that may result in death or serious personal injury if the corresponding measures are not taken.
Stop!	Danger of property damage. Reference to a possible danger that may result in property damage if the corresponding measures are not taken.

Application notes

Pictograph and signal word	Meaning
Note!	Important note to ensure troublefree operation
Tip!	Useful tip for simple handling
Reference!	Reference to another documentation

Special safety instructions and application notes

Pictograph and signal word	Meaning
Warnings!	Safety note or application note for the operation according to UL or CSA requirements.
Warnings!	The measures are required to meet the requirements according to UL or CSA.

2 Safety instructions

2.1 General safety information

Scope

The following general safety instructions apply to all Lenze drive and automation components.

The product-specific safety and application notes given in this documentation must be observed!

For your own safety



Danger!

Disregarding the following basic safety measures may lead to severe personal injury and damage to material assets!

- ▶ Lenze drive and automation components ...
 - ... must only be used for the intended purpose.
 - ... must never be operated if damaged.
 - ... must never be subjected to technical modifications.
 - ... must never be operated unless completely assembled.
 - ... must never be operated without the covers/guards.
 - ... can - depending on their degree of protection - have live, movable or rotating parts during or after operation. Surfaces can be hot.
- ▶ For Lenze drive and automation components ...
 - ... only use approved accessories.
 - ... only use original manufacturer spare parts.
- ▶ All specifications of the corresponding enclosed documentation must be observed.
This is vital for a safe and trouble-free operation and for achieving the specified product features.
The procedural notes and circuit details provided in this document are proposals which the user must check for suitability for his application. The manufacturer does not accept any liability for the suitability of the specified procedures and circuit proposals.
- ▶ Only qualified skilled personnel are permitted to work with or on Lenze drive and automation components.
According to IEC 60364 or CENELEC HD 384, these are persons ...
 - ... who are familiar with the installation, assembly, commissioning and operation of the product,
 - ... possess the appropriate qualifications for their work,
 - ... and are acquainted with and can apply all the accident prevent regulations, directives and laws applicable at the place of use.

Transport, storage

- ▶ Transport and storage in a dry, low-vibration environment without aggressive atmosphere; preferably in the packaging provided by the manufacturer.
 - Protect against dust and shocks.
 - Comply with climatic conditions according to the technical data.

Mechanical installation

- ▶ Install the product according to the regulations of the corresponding documentation. In particular observe the section "Operating conditions" in the chapter "Technical data".
- ▶ Provide for a careful handling and avoid mechanical overload. During handling neither bend components, nor change the insulation distances.
- ▶ The product contains electrostatic sensitive devices which can easily be damaged by short circuit or static discharge (ESD). Thus, electronic components and contacts must not be touched unless ESD measures are taken beforehand.

Electrical installation

- ▶ Carry out the electrical installation according to the relevant regulations (e. g. cable cross-sections, fusing, connection to the PE conductor). Additional notes are included in the documentation.
- ▶ When working on live products, observe the applicable national regulations for the prevention of accidents (e.g. BGV 3).
- ▶ The documentation contains information about EMC-compliant installation (shielding, earthing, arrangement of filters and laying cables). The system or machine manufacturer is responsible for compliance with the limit values required by EMC legislation.

Warning: The controllers are products which can be used in category C2 drive systems as per EN 61800-3. These products may cause radio interference in residential areas. If this happens, the operator may need to take appropriate action.
- ▶ For compliance with the limit values for radio interference emission at the site of installation, the components - if specified in the technical data - have to be mounted in housings (e. g. control cabinets). The housings have to enable an EMC-compliant installation. In particular observe that for example control cabinet doors preferably have a circumferential metallic connection to the housing. Reduce openings or cutouts through the housing to a minimum.
- ▶ Only plug in or remove pluggable terminals in the deenergised state!

Commissioning

- ▶ If required, you have to equip the system with additional monitoring and protective devices in accordance with the respective valid safety regulations (e. g. law on technical equipment, regulations for the prevention of accidents).

Maintenance and servicing

- ▶ The components are maintenance-free if the required operating conditions are observed.
- ▶ If the cooling air is polluted, the cooling surfaces may be contaminated or the air vents may be blocked. Under these operating conditions, the cooling surfaces and air vents must be cleaned at regular intervals. Never use sharp objects for this purpose!
- ▶ After the system has been disconnected from the supply voltage, live components and power connections must not be touched immediately because capacitors may be charged. Please observe the corresponding notes on the device.

Disposal

- ▶ Recycle or dispose of the product according to the applicable regulations.

2.2 Product-specific safety instructions

- ▶ Protect the device against direct solar radiation, since the housing may heat up strongly.
- ▶ The device is classified as a class A device and can cause radio interference in residential areas. In this case, the operator may have to take special measures. Any costs arising from these measures have to be paid by the operator.
- ▶ A touchscreen does not comply with the Ergonomics Directive ZH 1/618. This is why it is only designed for short-time inputs and monitoring functions. For longer inputs, connect an external keyboard.
- ▶ In the event of a fault, unplug the power connector immediately and send back the device to the manufacturer. The address can be found on the self-addressed envelope included in this documentation. Please use the original packaging to return the device!



Stop!

The product contains electrostatic sensitive devices.
Before working in the connection area, the personnel must be free of electrostatic charge.

3 Product description

Scope of supply

3 Product description

3.1 Scope of supply

Quantity	Name
1	Panel Controller
4	Screw clamp fixings for a screen size of 10.9 cm (4.3")
4	for a screen size of 17.8 cm (7")
8	for a screen size of 26.4 cm (10.4")
1	Connection plug for voltage supply
1	Plug connection for CAN bus
1	SD card (inserted)
1	Mounting instructions

3.2 Application as directed

The Controller is used as directed if it is solely used for implementing control and operating concepts or for presenting information in usual industrial and commercial fields. A different use, or one beyond these purposes, is not permissible.

A **use that is not intended** also includes a use harbouring fatal risks or dangers which, without the provision of exceptionally high safety measures, may result in death, injury or damage to material assets.

The Controller in particular must **not** be used ...

- ▶ in private areas.
- ▶ in potentially explosive atmospheres.
- ▶ in areas with harmful gases, oils, acids, radiation, etc.
- ▶ in applications where vibration and impact loads occur, exceeding the requirements of EN 50178.
- ▶ for performing safety functions, for instance
 - in air traffic control / in flight-control systems
 - for the monitoring/control of nuclear reactions
 - for the monitoring/control of means of mass transport
 - for the monitoring/control of medical systems
 - for the monitoring/control of weapon systems

Higher-level safety systems must be used to guarantee the protection of persons and material assets!

3.3

Device features

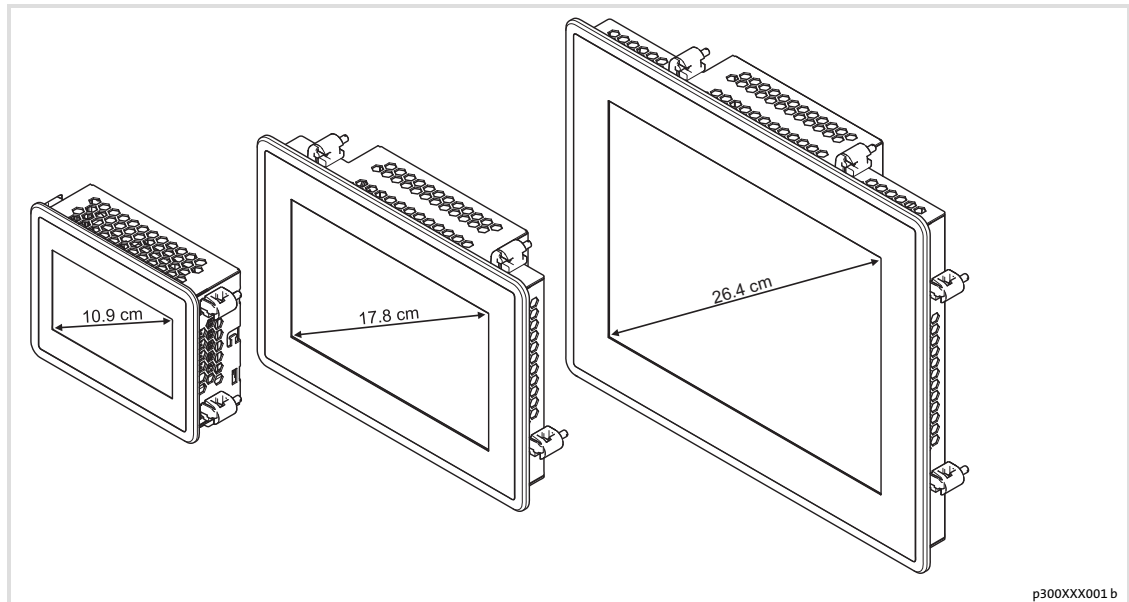
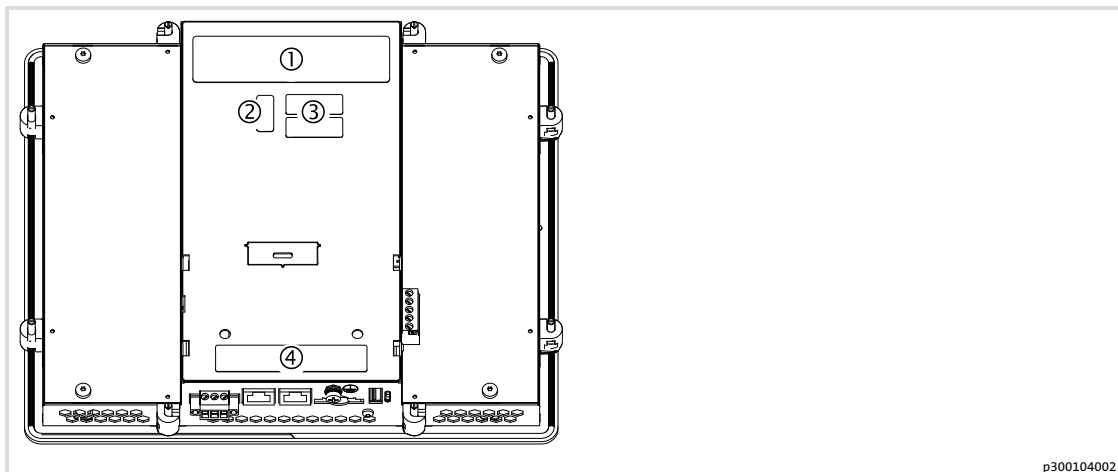


Fig. 3-1 Panel Controller p300 / HMI p300

	Panel Controller p300 / HMI p300		
	10.9 cm (4.3")	17.8 cm (7")	26.4 cm (10.4")
Screen resolution	480 x 272 pixels (PSP)	800 x 480 pixels (WVGA)	800 x 600 pixels (SVGA)
Touchscreen	<ul style="list-style-type: none"> ● Resistive single touch ● Anti-newton ring design ● Surface hardness 3H ● Transmission degree ~80 % 		
Design	<ul style="list-style-type: none"> ● Housing made of sheet steel ● Front frame made of anodised and etched aluminium ● Front film made of polyester ● Fanless and maintenance-free 		
Mounting	<ul style="list-style-type: none"> ● For installation in control cabinets, machine enclosures, and control boards 		
Control and display elements	<ul style="list-style-type: none"> ● Reset button ● 4 diagnostic LEDs (power, PLC status, backplane bus status and one freely programmable LED) 		
Processor	<ul style="list-style-type: none"> ● Cortex™-A8, 800 MHz 		
Equipment	<ul style="list-style-type: none"> ● 512 MB DDR3-RAM ● Windows® Embedded Compact 7 operating system (WEC7) on flash memory (2 GB) 		
Runtime software	<ul style="list-style-type: none"> ● VisiWinNET compact CE, 500 power tags ● Only Panel Controllers: runtime software control technology: LPC1000 		
Interfaces	<ul style="list-style-type: none"> ● 1 x SD/SDHC card ● 1 x USB 2.0 ● 1 x Ethernet ● 1 x EtherCAT (in preparation) ● 1 x CAN 		
UPS functionality	<ul style="list-style-type: none"> ● Implemented 		

3.4 Identification

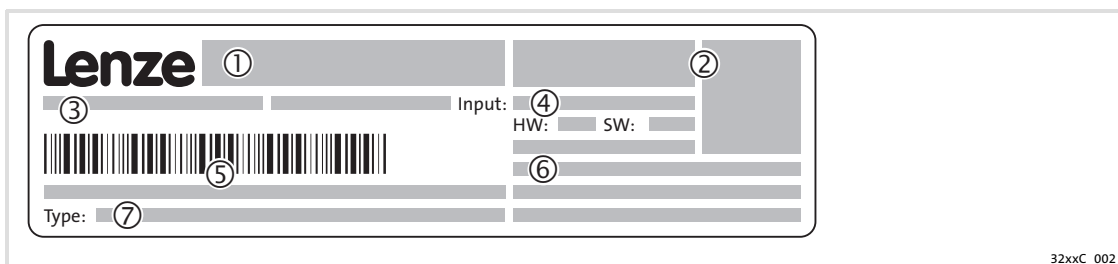
How to find information



p300104002

- ① Nameplate
- ② Windows licence number (may also be placed at the side on the right)
- ③ MAC addresses, for X2 and X3
- ④ Terminal assignment

Nameplate



32xxC_002

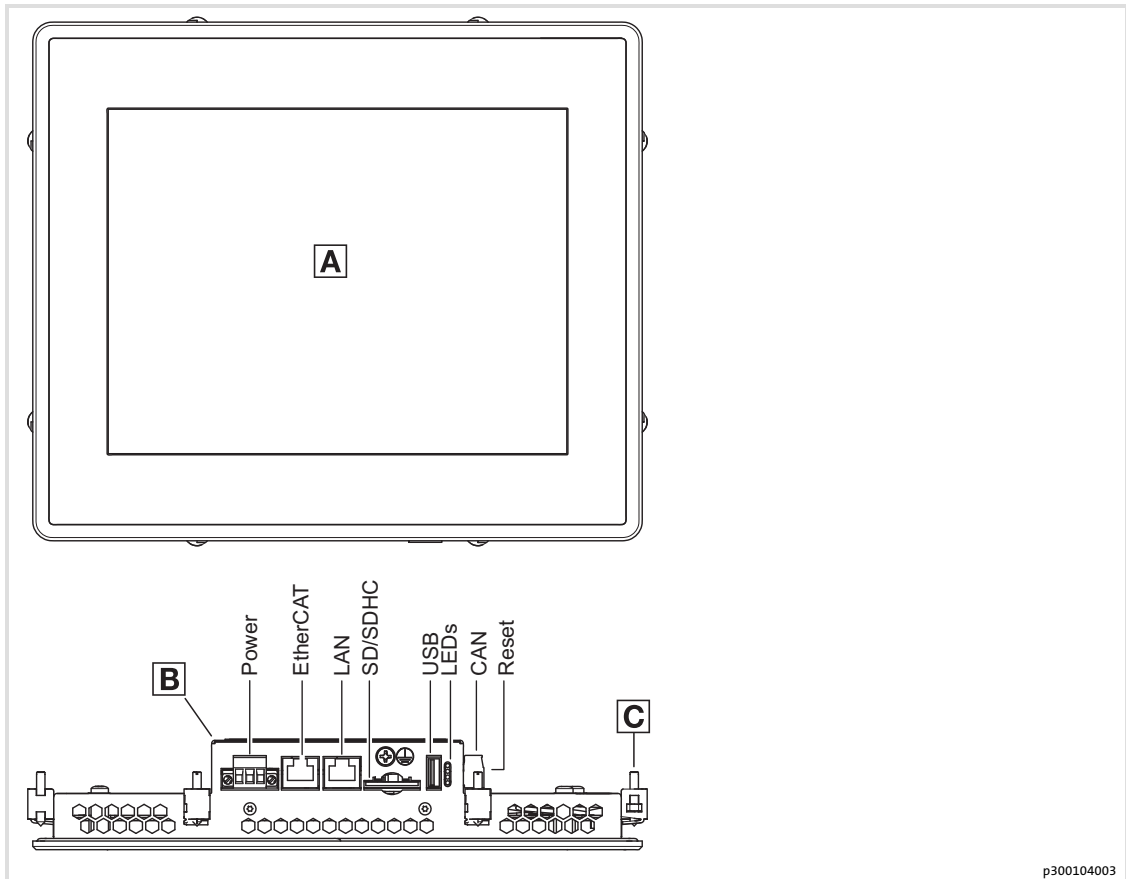
- ① Manufacturer
- ② Certification
- ③ Type designation
- ④ Technical data
- ⑤ Serial number as bar code and numerically
- ⑥ Material number (customer-specific)
- ⑦ Type code/order number

Type code

Panel Controller p300	⑦					
	P30GAP	x	0300F3G	x	XXX-02S3C	x
Panel diagonal 8 = 10.9 cm (4.3") 9 = 17.8 cm (7") 4 = 26.4 cm (10.4")						
Extensions 0 = without						
Control technology runtime software 3 = L-force Logic: LPC1000 (V3.x)						

HMI p300	⑦					
	P30GAH	x	0300F3G	x	XXX-02S3C	x
Panel diagonal 8 = 10.9 cm (4.3") 9 = 17.8 cm (7") 4 = 26.4 cm (10.4")						
Extensions 0 = without						
Control technology runtime software 0 = without						

3.5 Controls and displays



Pos.	Description
A	Touchscreen
B	Controller
C	Screw clamp fixings

LED				Message
Power	Error	Status 1	Status 2	
Is lit blue	Off	Off	Off	Supply voltage is available and system clock is synchronised.
Is lit blue	Off	Blinking yellow	Off	Operating system running (WEC7) and the control technology is started
Is lit blue	Blinking red	Blinking yellow	Off	SD card not found
Yellow is continuously ON	Off	Off	Off	Input voltage has fallen below a minimum value (power fail). UPS function is activated.
Yellow is blinking	Off	Off	Off	Reset after failed backup/restore
Is blinking blue/yellow	Off	Off	Off	System clock is not synchronised.
Off	Off	Off	Off	Reset has been activated
-	Messages of the optional "backup and restore tool": see documentation for the "backup and restore tool"			

3.6 UPS functionality


The Panel Controller is provided with a backup functionality via which user data (retain variables) are saved in the case of a supply voltage failure before the device is switched off.

	Panel Controller
	p300
UPS functionality via	internal buffer capacitor
Storage medium for backup data	SD/SDHC card
Buffer time sufficient for	128 kB retain data

3.7 Real-time clock functionality

The operating system receives the CMOS-RTC time via a maintenance-free clock chip. The clock chip is buffered internally for at least 28 days. Then the clock must be set again. A battery is not required.

3.8 Reset Device

To reset the device, press the reset button ( 17). There are two options:

- ▶ Reset button is pressed for >4 s and <10 s.
 - Reset of the complete system is carried out.
 - All LEDs are off during reset.
 - After a successful reset, the POWER-LED is lit blue.
- ▶ Reset button is pressed for >10 s.
 - Default setting is loaded and restart is carried out.
 - All LEDs are off during reset.
 - Backup image is loaded.
 - After a successful reset, the POWER-LED is lit blue.

4 Technical data

4.1 General data and operating conditions

General data

Conformity and approval

Conformity		
CE	2004/108/EC	EMC Directive
Other		
RoHS	2011/65/EU	Products lead-free in accordance with directive

Protection of persons and device protection

Enclosure		
Front	EN 60529	IP65
Rear	EN 60529	IP20
Electrical isolation		
To the fieldbus		Yes
To the process level		None
Protective measures		Against short circuit

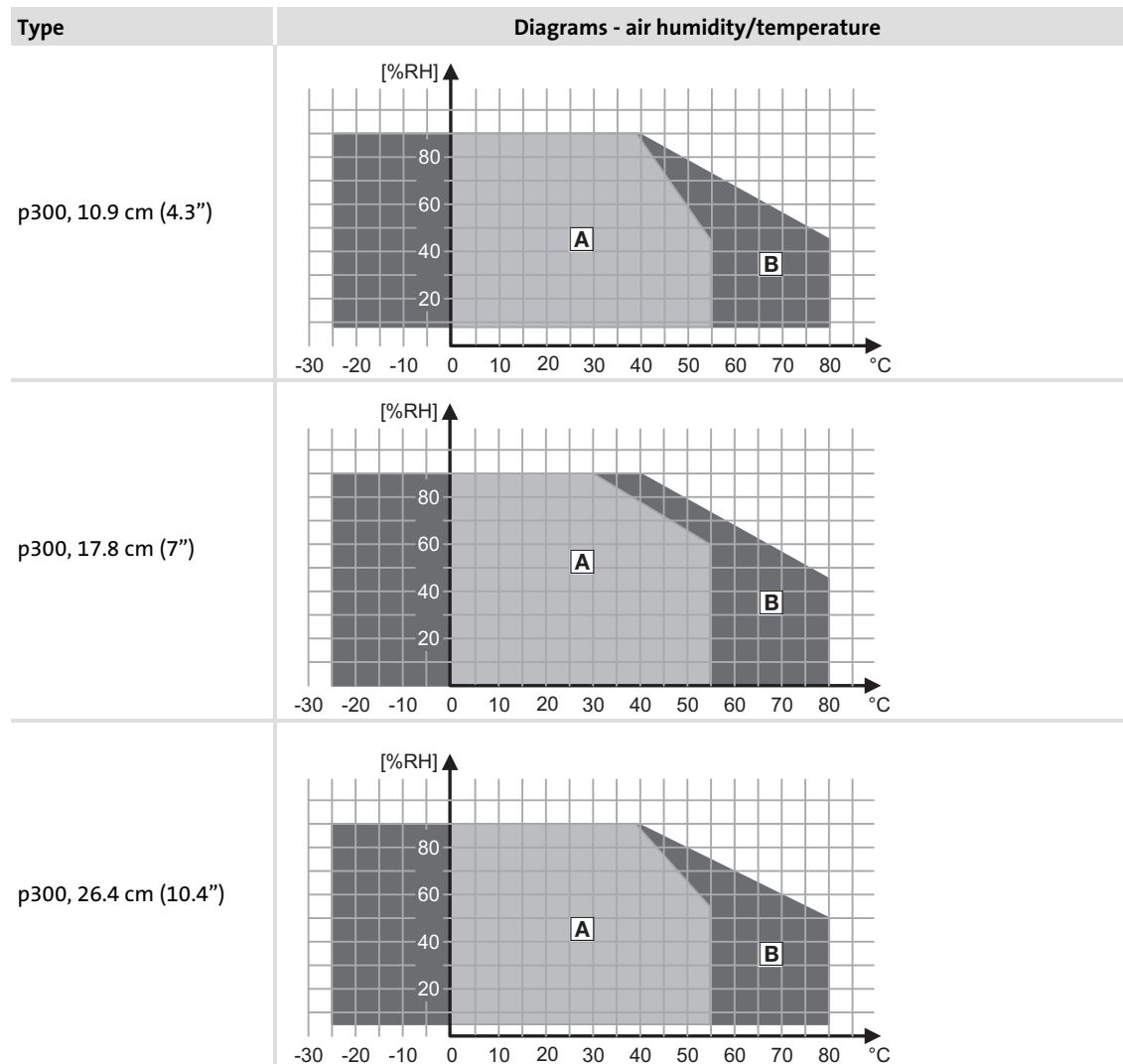
EMC

Noise emission	EN 61000-6-4	Class A (industrial premises)
Noise immunity zone B	EN 61000-6-2	Industrial premises
	EN 61000-4-2	ESD; severity level 3, i. e. 8 kV for air discharge, 4 kV for contact discharge
	EN 61000-4-3	RF interference (housing) 80 MHz ... 1000 MHz, 10 V/m 80 % AM (1 kHz)
	EN 61000-4-4	Burst, severity level 3
	EN 61000-4-5	Surge, severity level 1
	EN 61000-4-6	RF cable-guided 150 kHz ... 80 MHz, 10 V/m 80 % AM (1 kHz)

Operating conditions

Ambient conditions

Climatic		
Storage/transport	IEC/EN 60068-2-14	-25 ... +70 °C depending on the air humidity (see diagrams)
Operation	EN 61131-2	0 ... +50 °C depending on the air humidity (see diagrams)
Air humidity	EN 61131-2	RH1 (without condensation, relative humidity 10 ... 95 %)
Pollution	EN 61800-5-1	Pollution degree 2
Mechanical		
Vibration	EN 60068-2-6	1 g
Shock	EN 60068-2-27	15 g
Site altitude		
Operation		< 2000 m amsl



- ▣ A During operation
- ▣ B During storage/transport

Mounting conditions	
Mounting place	In the control cabinet, screen protected against direct solar radiation
Mounting position	Terminals at the sides or bottom

4.2 Electrical data

Type	Supply						
	Voltage range [V DC]	Voltage [V DC]	Rated data ¹⁾			Max. ²⁾	
			Current [A]	Power [W]	Current [A]	Power [W]	
p300, 10.9 cm (4.3")	+18 ... +30	24	0.36	9	0.87	21	
p300, 17.8 cm (7")			0.47	12	0.88	21	
p300, 26.4 cm (10.4")			0.59	15	0.89	22	

¹⁾ With 24 V, without USB consumer (max. 0.5 A)

²⁾ With 24 V, full load and during boot/UPS loading phase (max. 30 s)

Type	Screen					
	Format	Resolution [pixels]	No. of colours	Brightness	Contrast	BLT ³⁾
				[cd/m ²]		
p300, 10.9 cm (4.3")	16:9	480 x 272 (PLC)	16777216	400	1:400	50000
p300, 17.8 cm (7")	15:9	800 x 480 (WVGA)	262144	320	1:400	20000
p300, 26.4 cm (10.4")	4:3	800 x 600 (SVGA)		400	1:700	50000

³⁾ Backlight Life Time

4.3 Mechanical data

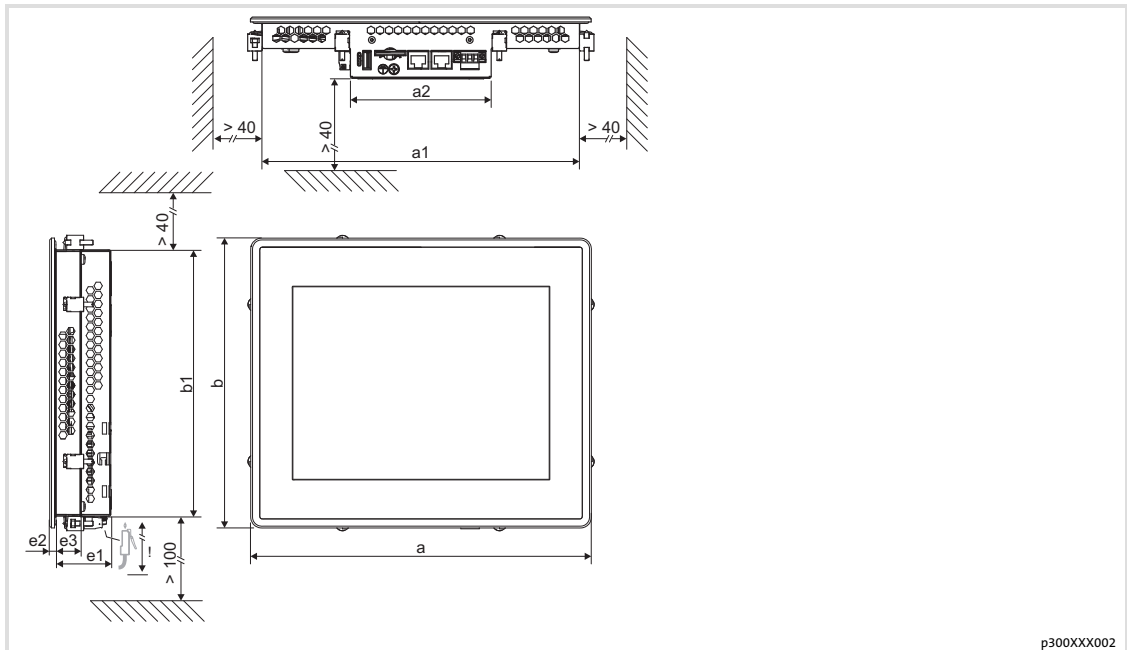
Type	Dimensions	Mass
	W x H x D [mm]	[kg]
p300, 10.9 cm (4.3")	130 x 104 x 45	0.5
p300, 17.8 cm (7")	210 x 155 x 51	1.0
p300, 26.4 cm (10.4")	282 x 240 x 51	2.0

5 **Mechanical installation**

5.1 **Important notes**

- ▶ To prevent damage to electronic components, only mount/remove the device with the voltage supply switched off.
- ▶ The mounting location always must correspond to the operating conditions specified in the technical data. If required, take additional measures.
- ▶ In the installation space, continuous and sufficient air circulation is absolutely required to dissipate the heat of the device. The ventilation slots must not be covered.
- ▶ When selecting the installation site, be sure to observe an ergonomic position of the screen and pay regard to the incidence of light, which may cause reflections on the screen.
- ▶ During installation, there is a danger that the controller will fall out of the mounting cutout. You should therefore secure it to prevent this happening until all screw clamps have been fitted.
- ▶ During mounting, the gasket of the front frame is exposed and can be damaged.
 - Handle the gasket with care during mounting.
 - Protect the gasket against ultraviolet rays.
 - Check the gasket to make sure it is undamaged before you install the device.
- ▶ The device must be securely seated in the mounting cutout and the front panel seal must be correctly fitted. Otherwise, class of protection IP65 will not be achieved on the front side of the device!

5.2 Dimensions

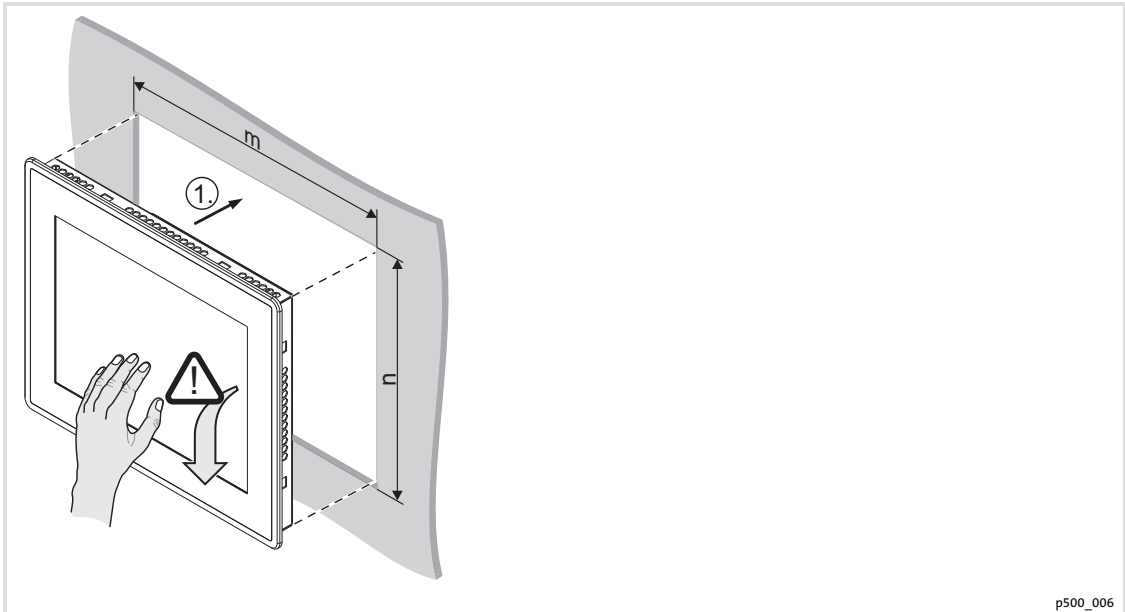


	a	a1	a2	b	b1	e1	e2	e3
	[mm]							
p300, 10.9 cm (4.3")	130	117	117	104	91	42	3	-
p300, 17.8 cm (7")	210	191	117	155	136	47	4	22
p300, 26.4 cm (10.4")	282	263	117	240	221	47	4	22

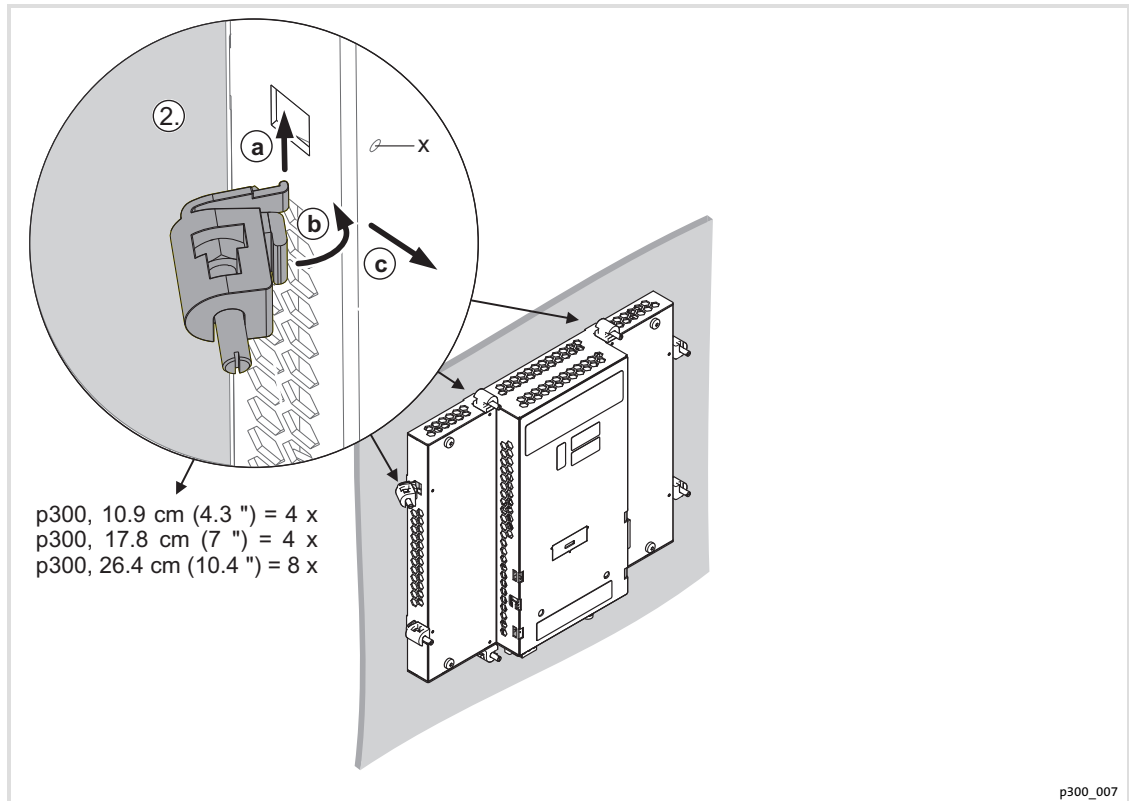
5 Mechanical installation

Mounting steps

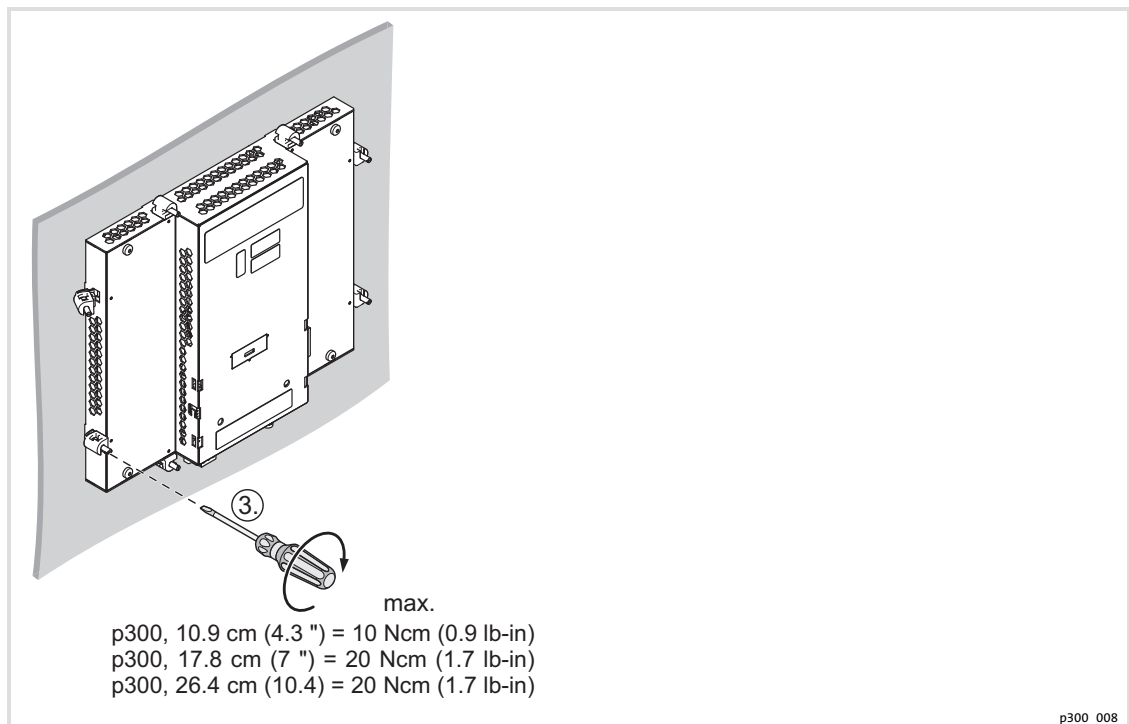
5.3 Mounting steps



	m	[mm]	n
p300, 10.9 cm (4.3")	119		94
p300, 17.8 cm (7")	194		139
p300, 26.4 cm (10.4")	266		224



x Positioning aid for screw clamps



6 Electrical installation

Important notes

6 Electrical installation

6.1 Important notes

The installation must be carried out by qualified, skilled personnel familiar with the applicable national standards.



Stop!

Short circuit and static discharge

The device contains components which are endangered in the case of short circuit or static discharge.

Possible consequences:

- ▶ The device or parts of it will be destroyed.

Protective measures:

- ▶ Always switch off the voltage supply when working on the device. This particularly applies:
 - Before connecting / disconnecting connectors.
 - Before plugging in / plugging out modules.

6.2 Wiring according to EMC

General notes	<ul style="list-style-type: none"> ● The electromagnetic compatibility of the system depends on the type and accuracy of the installation. Please especially note the following: <ul style="list-style-type: none"> – Structure – Shielding – Earthing ● In the case of a differing installation it is required for evaluating the conformity to the EMC Directive to check the system with regard to compliance with the EMC limit values. This for instance applies to: <ul style="list-style-type: none"> – The use of unshielded cables ● The end user is responsible for compliance with the EMC Directive. <ul style="list-style-type: none"> – If you observe the following measures, you can be sure that no EMC problems will occur during operation and that the EMC Directive or the EMC law is met. – If devices which do not meet the CE requirement with regard to noise immunity EN 61000-4-2 are actuated near the system, these devices can be affected electromagnetically by the system.
Structure	<ul style="list-style-type: none"> ● Connect device to the earthed mounting plate: <ul style="list-style-type: none"> – Mounting plates with an electroconductive surface (zinc-coated or stainless steel) allow for continuous contacting. – Coated plates are not suitable for an EMC-compliant installation. ● If you use several mounting plates: <ul style="list-style-type: none"> – Connect mounting plates to each other on a large surface and in a conductive manner (e.g. by means of copper strips). ● When installing the cables, observe a spatial separation of signal and mains cables. ● Route the cables as near to the reference potential as possible. Freely suspended cables act like aerials.
Shielding	<ul style="list-style-type: none"> ● Preferably only use cables with a braid. ● The coverage of the shield should be more than 80%. ● In the case of data lines for a serial coupling, always use metallic or metallised plugs. Connect the shield of the data line on the connector shell.
Earthing	<ul style="list-style-type: none"> ● Earth all metallically conductive components by the use of corresponding cables from a central earthing point (PE rail). ● Comply with the minimum cross-sections defined in the safety instructions: <ul style="list-style-type: none"> – With regard to EMC, however, not the cable cross-section, but the surface of the cable and of the extensive contacting is decisive.

6

Electrical installation

Connecting the supply and peripheral devices
Terminal diagram supply

6.3 Connecting the supply and peripheral devices

6.3.1 Terminal diagram supply



Stop!

No device protection against excessive input voltage

The voltage input is not fused internally.

Possible consequences:

- ▶ The device can be destroyed when the input voltage is too high.

Protective measures:

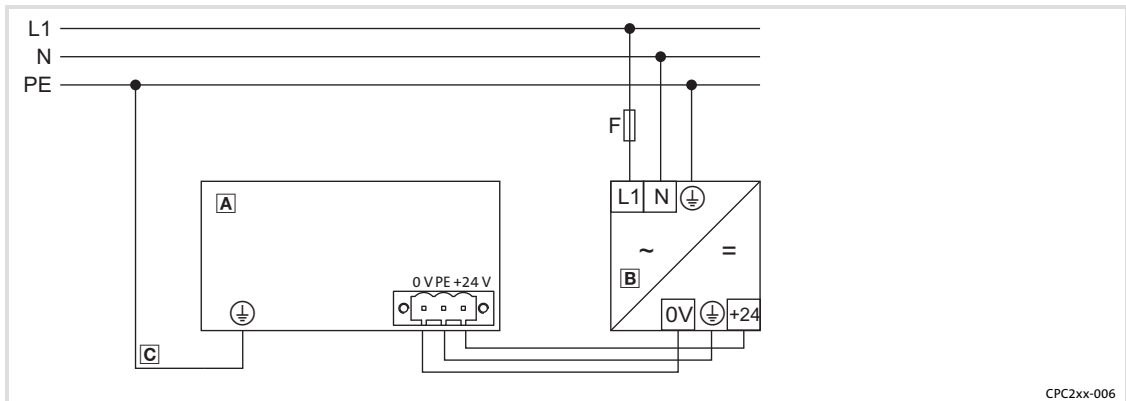
- ▶ Observe the max. permissible input voltage.
- ▶ Professionally fuse the device on the input side against voltage fluctuations and voltage peaks.



Note!

The controller starts as soon as the supply voltage is applied.

After the operating system has been shut down, the controller switches off automatically. For restarting, the supply voltage has to be disconnected for a short time.



CPC2xx-006

- A** Controller
- B** Power supply unit
- C** Protective earth conductor connection on the supply side (PE, internally bridged with GND)


6.3.2

24 V connection

X1	Description	Connection type	Cable type
 IPC001	Connection of 24 V DC current supply	3-pin Combicon socket	Cable (conductor cross-section max. 2.5 mm ²) with Combicon connector
 IPC001	PE connection	M4 (PH 2)	Separate earthing conductor (min. 2.5 mm ²) with ring cable lug

6.3.3 EtherCAT interface

Support of this interface is in preparation!

X2	Beschreibung	Anschlusstyp	Kabeltyp
 <small>IPC001</small>	EtherCAT	RJ45-Buchse	Netzwerkkabel CAT5e S/FTP (empfohlen) Kabellänge max. 100 m




Note!

If the RJ45 plug connection is exposed to oscillating or vibrating stress:

- ▶ Use a strain relief in the immediate vicinity of the RJ45 socket.
- ▶ Select the contact surface on which the device is mounted as fixing point of the strain relief.
- ▶ Comply with the related minimum bending radius of the cable used.

6.3.4

Ethernet interface

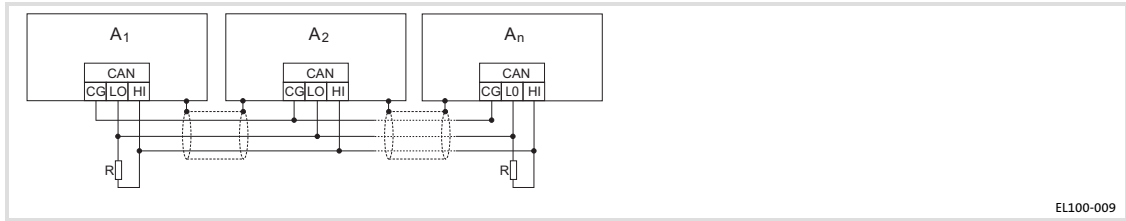
X3	Description	Connection type	Cable type
 IPC001	Ethernet LAN	RJ45 socket	Network cable CAT5e S/FTP (recommended) Max. cable length 100 m

**Note!**

If the RJ45 plug connection is exposed to oscillating or vibrating stress:

- ▶ Use a strain relief in the immediate vicinity of the RJ45 socket.
- ▶ Select the contact surface on which the device is mounted as fixing point of the strain relief.
- ▶ Comply with the related minimum bending radius of the cable used.

6.3.5 CAN port



- | | |
|----|--------------------------------|
| A1 | Node 1 |
| A2 | Node 2 |
| An | Node n |
| CG | CAN-GND |
| LO | CAN-LOW |
| HI | CAN-HIGH |
| R | 120 Ω-bus terminating resistor |

We recommend the use of CAN cables in accordance with ISO 11898-2:

CAN cable in accordance with ISO 11898-2	
Cable type	Paired with shielding
Impedance	120 Ω (95 ... 140 Ω)
Cable resistance/cross-section	
	Cable length ≤ 300 m
	≤ 70 mΩ/m / 0.25 ... 0.34 mm ² (AWG22)
	Cable length 301 ... 1000 m
	≤ 40 mΩ/m / 0.5 mm ² (AWG20)
Signal propagation delay	≤ 5 ns/m

X5	Description	Connection type	Cable type
<p style="text-align: center;">EL100-011</p>	CAN bus connection Pin 1: CAN-GND (CG) Pin 2: CAN-LOW (LO) Pin 3: not assigned Pin 4: CAN-HIGH (HI) Pin 5: not assigned	5-pole Phoenix Combicon socket	CAN cable according to ISO 11898-2 with Phoenix Combicon connector, MSTB 2.5 / 5-STF-5.08

Shield connection of CAN cable above cable clamp in the control cabinet:

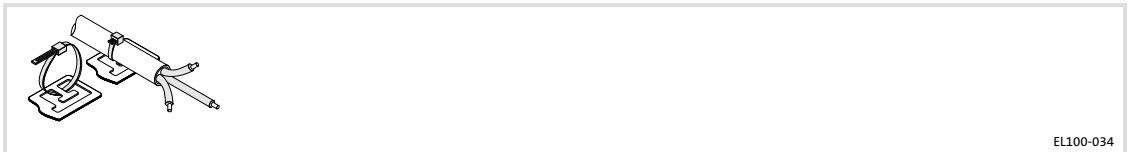


6.3.6 Cable fixing and strain relief


Fasten the cable bundles on the device using cable ties.




Fastening point for cable ties for strain relief



6.3.7 USB interface

X4	Description	Connection type	Cable type
 IPC001	USB 2.0 host connection Max. load: 5 V/500 mA	USB-A socket	USB cable with USB-A plug

6.3.8 SD card interface

SD	Description	Connection type	Cable type
	SD-/SDHC-compatible	Slot	-



Note!

The combination of control technology software and application data on the SD card ensures that the data suit the respective application in the present version. This enables an easy transfer of the SD card to another device.

Automatic, possibly unwanted and difficult-to-handle update/downgrade processes can be avoided in this way.

The SD card is used as a flash memory for the following applications:

- ▶ PLC boot project (not in HMI version)
- ▶ Visualisation
- ▶ Databases of the data manager
- ▶ prestart.txt/poststart.txt
- ▶ MB of retain and logbook data
- ▶ Customer-specific data

The SD card is not bootable and must always be inserted!

Exchanging the SD card

1. To unlock the SD card, gently press it into the slot and let loose.
2. Remove the SD card carefully.
3. Gently press another SD card into the slot until it locks into place with a click.

7 Maintenance

Regular checks

7 Maintenance

7.1 Regular checks

The device is free of maintenance. Nevertheless, visual inspections should be carried out at regular intervals which must not be too long, depending on the ambient conditions.

Please check the following:

- ▶ Does the environment of the device meet the operating conditions specified in the Technical data?
- ▶ Is the heat dissipation of the device not impeded by dust or dirt?
- ▶ Are the mechanical and electrical connections o.k.?

7.2 Cleaning



Stop!

Sensitive surfaces and components

The device can be damaged if it is not appropriately cleaned.

Possible consequences:

- ▶ The housing or the screen gets scratched or dull if you use alcoholic, solvent-containing or scouring cleaning agents.
- ▶ Electrical components can be damaged ...
 - by a short circuit caused by humidity.
 - by static discharge.

Protective measures:

- ▶ Observe the following notes.
- ▶ Before cleaning, disconnect the device from the power supply as otherwise unintentional commands may be activated via the touchscreen, for example a response of the control.
- ▶ Clean the device front (screen and frame) as follows:
 - Use a clean, lint-free and soft cloth.
 - Moisten the cloth with the detergent. Do not spray the detergent directly on the device.
 - Only use water with a fluid addition as detergent or a detergent declared especially for flat screens.
- ▶ Clean the rear side of the device with a clean, lint-free and soft cloth. Do not use liquid or foaming detergent since it may enter the housing or terminals.

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