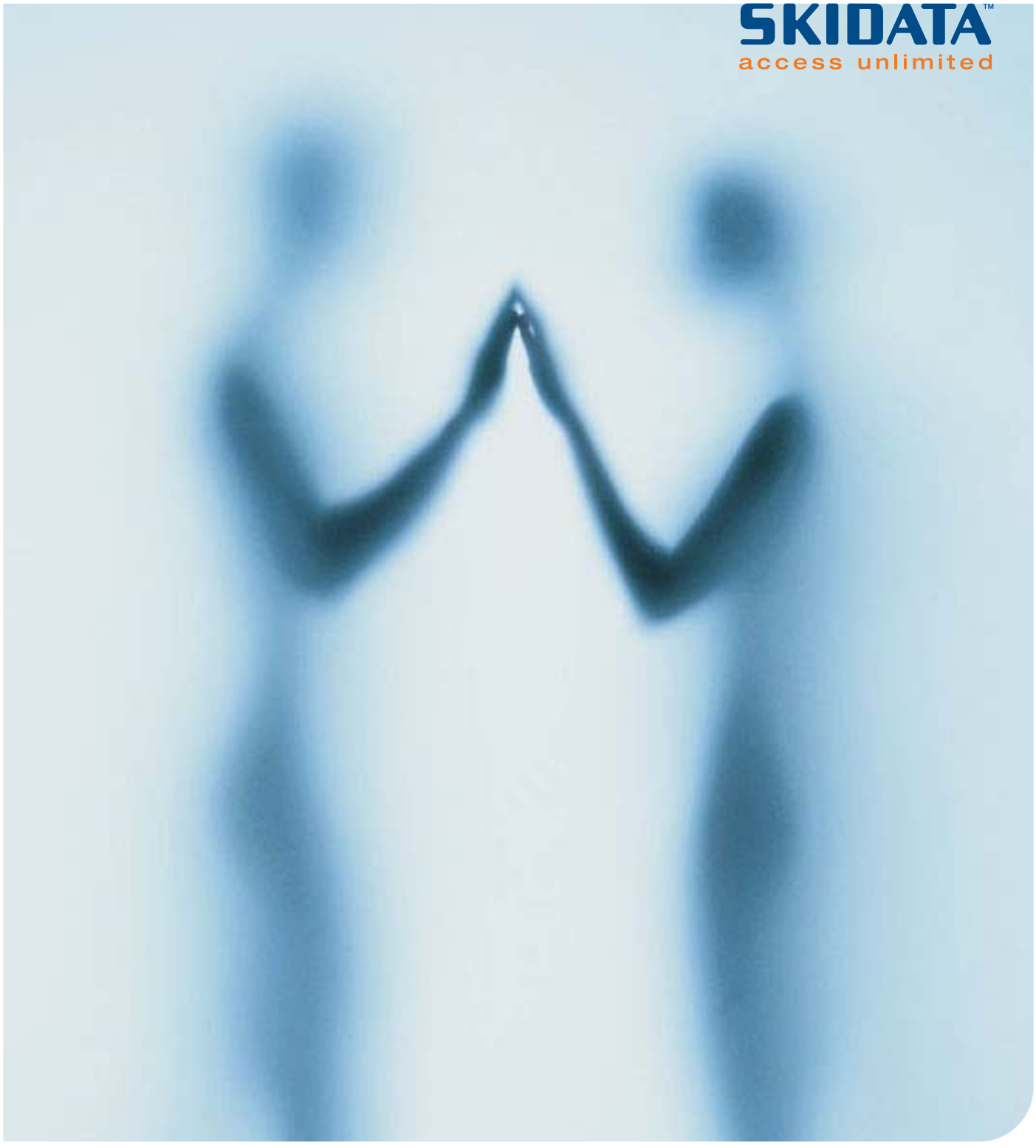
Parking Columns System SPT 400

Parking Column EN/EX EMPTY 400
Parking Column ENTRY LCD 400
Parking Column ENTRY GR MON 400
Parking Column EXIT LCD 400
Parking Column EXIT GR MON 400
Parking Column EN/EX EMPTY 400 - US
Parking Column ENTRY LCD 400 - US
Parking Column ENTRY GR MON 400 - US
Parking Column EXIT LCD 400 - US
Parking Column EXIT GR MON 400 - US

Manual and operational description

SKIDATA™
access unlimited



Version February 2004

SKIDATA AG
Technical Documentation
Untersbergstrasse 40
A-5083 Gartenau
Telephone +43 6246 888-0,
Telefax +43 6246 888-7
Internet http://www.skidata.com
e-mail docu@skidata.com

Please note
During the compilation of this Technical Documentation, great care has been taken to ensure the accuracy of the information contained in it. However, despite our constant effort to ensure the highest degree of accuracy and comprehensiveness possible, the information provided cannot be guaranteed to be absolutely error-free.

Trademarks
This documentation may contain representations of registered product or service trademarks owned by SKIDATA AG or third parties, as well as references to proprietary know-how protected by copyright laws or other legal provisions. In any case the intellectual property rights remain exclusively with their respective owners.

Declaration of Conformity
The Parking Columns of System SPT 400 except the model versions where the name ends with the characters “-US” have been developed, designed and manufactured in accordance with the following EU directive:

R&TTE (99/5/EC)

CE 0408

Important : The FCC-specific notes apply only to the model versions where the name ends with the characters “-US”.

FCC 15.19:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC 15.21:

IMPORTANT: Any changes to or modifications of Parking Columns of System SPT 400 unless expressly approved by SKIDATA AG, may void the user's authority to operate this device.

Parking Columns System SPT 400 1

Document Management – Version Table

Tab. 1: Document Version Table for Installation & Maintenance Instructions

Section	Document	Pages	Version	Date
1	Parking Columns System SPT 400	25	1.0	2004-02-11

1

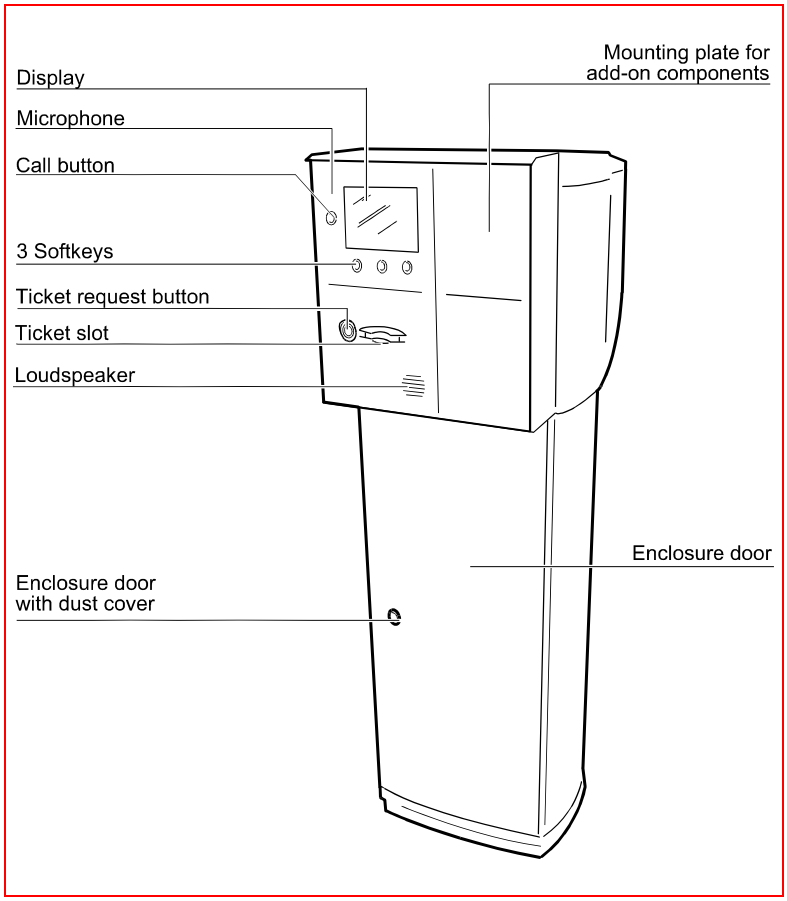
Parking Columns System SPT 400

Version 1.0
25 pages

1.1 Contents

1.2 Parking Column for System SPT 400

Fig. 1:
Parking Columns for System SPT 400



General Warning:
PCBs are sensitive to electrostatic discharge and should be handled with great care to avoid damage to the circuitry. Avoid touching the boards unnecessarily. Before mounting the column, check the entire device for possible transport damage. Before accessing electronical or mechanical parts, the entire deviced must be disconnected from the mains.

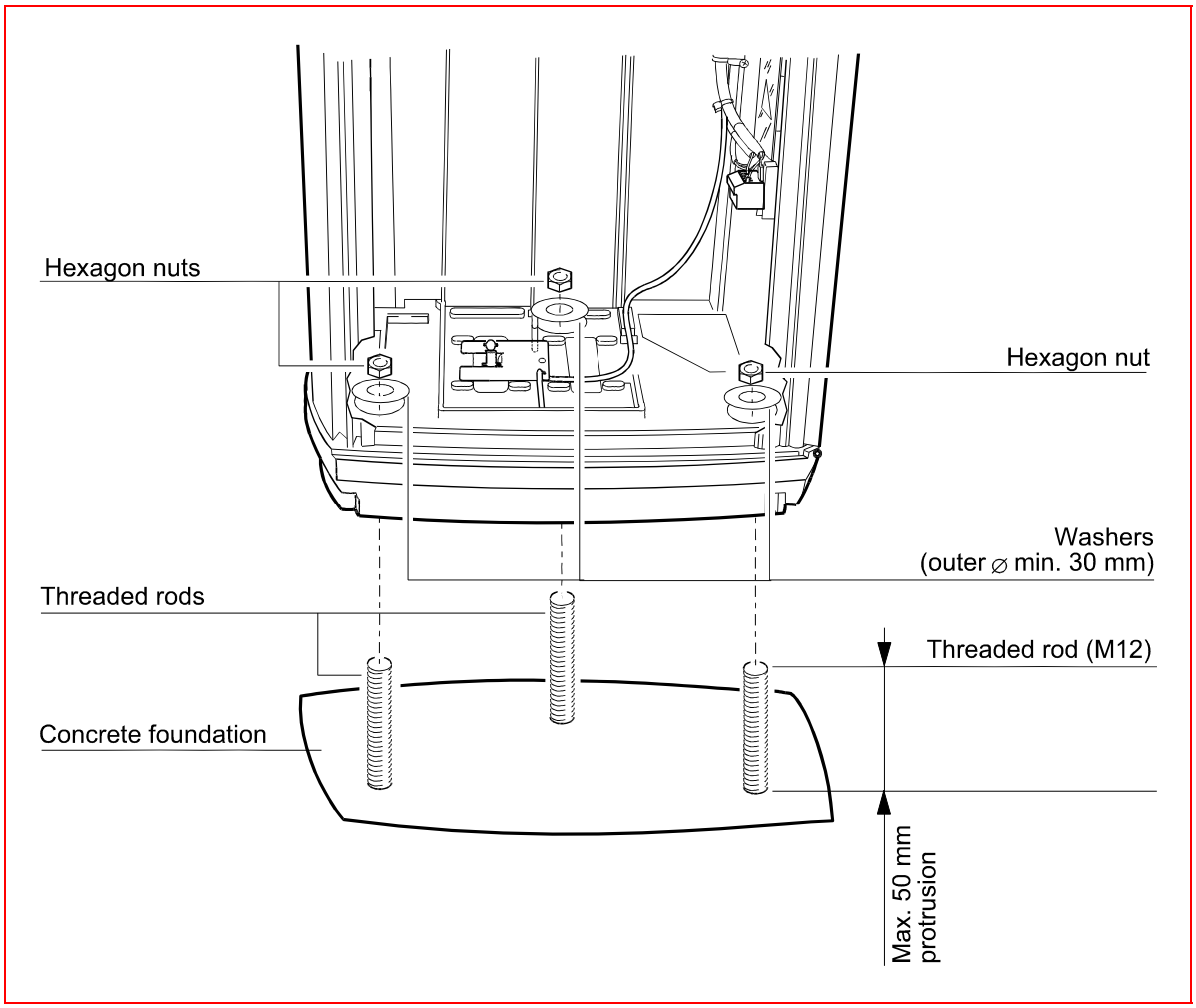
Ensure the following before proceeding with the installation:

- The concrete foundation must be exactly horizontal. Installing the device on an uneven surface may cause the chassis to become warped or damaged. If levelling of the surface is not possible, the parking column must be level-adjusted, e.g. by using additional hexagon nuts (see Fig. *Hexagon nuts as spacers*); in that case the threaded rods must be allowed to protrude further.
- The surface of the concrete foundation must be even and exactly horizontal
- Cable protection tubes should be cut approx. 2 cm above the concrete surface

1.2.1 Installation

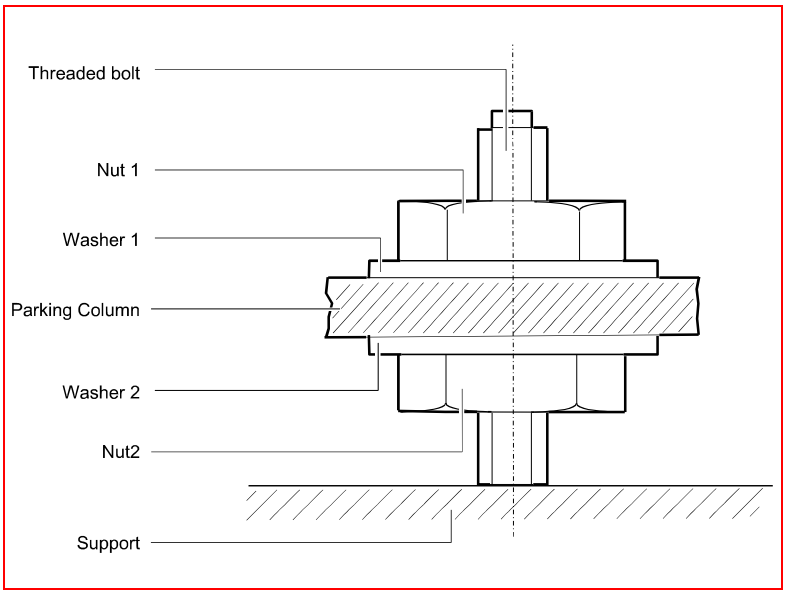
- The threaded rods should protrude approx. 50 mm from the concrete surface
- The fastening tension of the hexagon nuts must not exceed **20 Nm**
- Use washers with large outer diameter (∅ = 30 mm, as per UN 737 standard)
- The parking column must be aligned exactly horizontally

Fig. 2: Column installation



Installation on non-level surfaces (applies only in exceptional circumstances)

Fig. 3:
Hexagon nuts as spacers

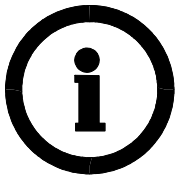


All three No. 2 washers must be absolutely level (use a spirit level if necessary).

Important:
Avoid drilling dust from getting into the device during installation, as electrostatically charged dust may cause damage to the electronic assemblies inside the column.

1.2.2 Power supply

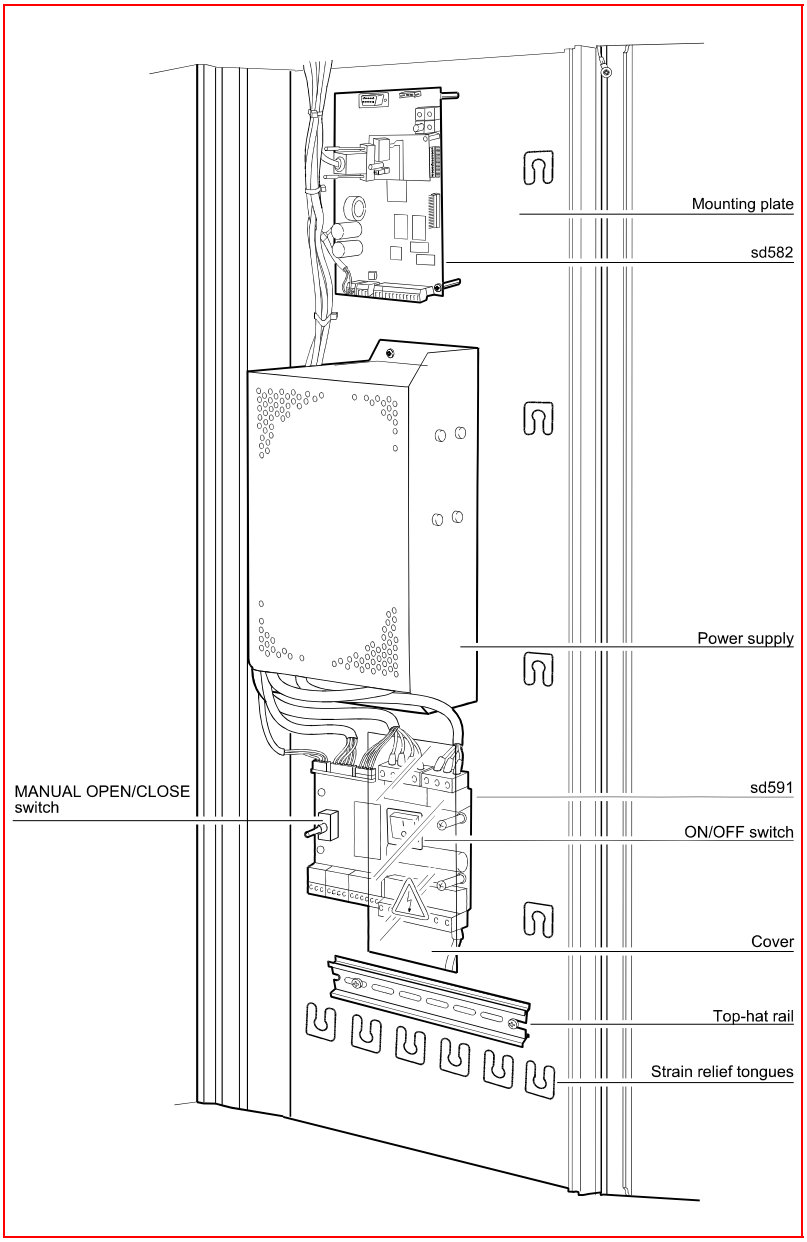
Two types of Parking Columns are available : 120 V und 230 V



Important notes:
Electric installation and maintenance work may be carried out only by appropriately qualified, licensed electrical technicians.
Mains connections must be hardwired.
Please ensure full compliance with all applicable national and international rules and regulations concerning electric connections, and all applicable safety regulations.

When all electric lines are properly connected, replace and fasten the cover.

Fig. 4:
Column interior:
Mounting plate configuration



Ensure the following before proceeding with electrical connections:

- Check for proper mains supply voltage (120 V or 230 VAC)
- Mains connections must comply with national standards and guidelines
- When using flexible stranded wires, all filaments must be placed inside the terminal clamps (use wire-end sleeves, if necessary)
- The mains supply line must be fused in accordance with applicable regulations (6 A fuse recommended)
- Check the **isolation resistance of the cables** to make sure it **exceeds 0.5 MΩ**
- Fix cables to mounting plate by way of tension relieve tongues and cable ties
- Check the network cables to ensure the proper loop impedance

Important: Always make sure that the device is completely disconnected from the mains while fitting electric wiring.

1.2.3 Stripping connection wires

To avoid danger of short circuit with wires or chassis parts, wires should not be stripped by more than 6 mm (recommended value). Uninsulated wire sections must be inserted completely into the connection terminals.

When attaching connecting wires, the insulation should cover the wire up to the point where it connects to the terminal.

Fig. 5:
Correct connector wiring

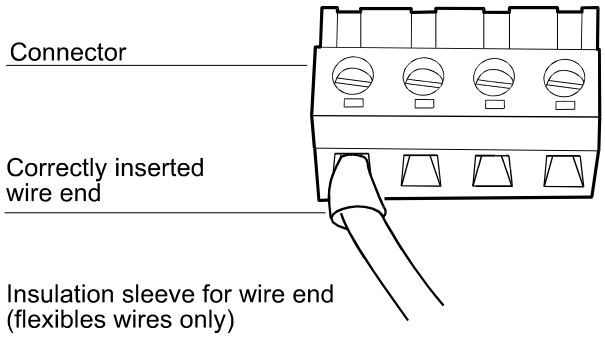
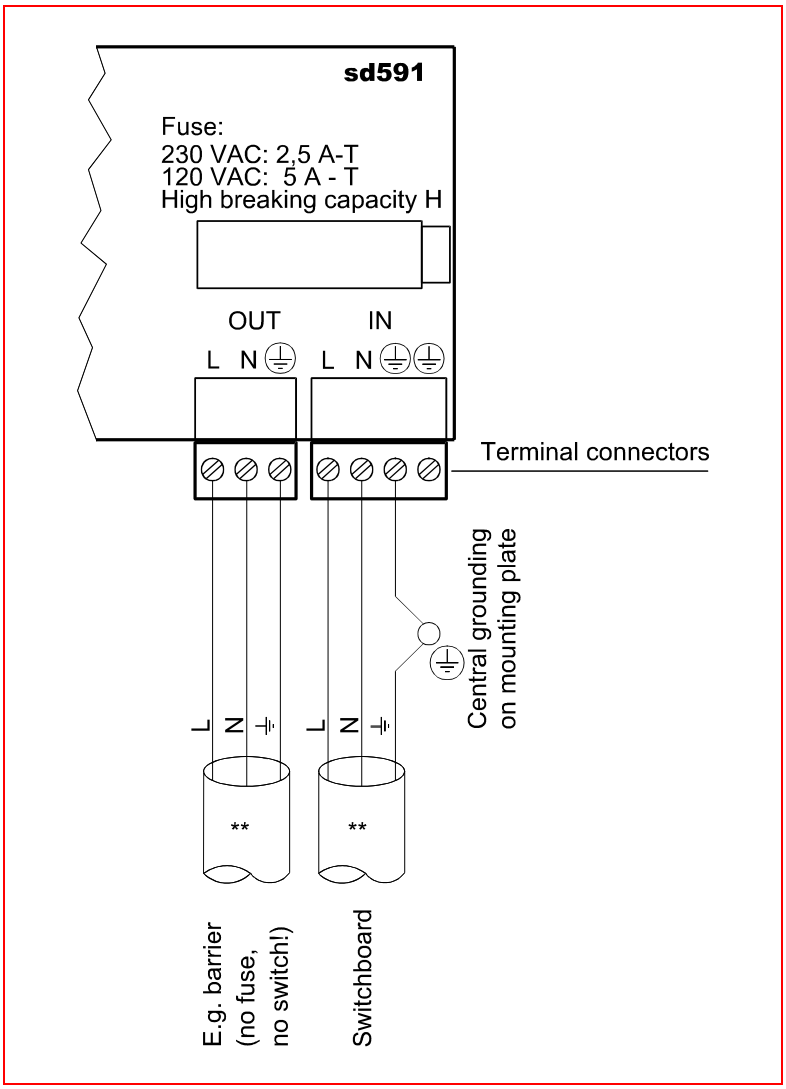
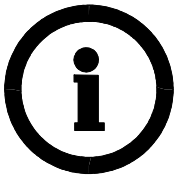


Fig. 6:
Power supply on sd591



** see 1.2.4 Section Cross-sectional area of cable leads

Caution:
The OUT terminal on connection control board sd591 is not fused and cannot be deactivated by way of the on-board mains switch.



Note:
Electrical leads and wires must comply wirth applicable national guidelines concerning

– mechanical stress
– tension resistance
– cross-sectional area with respect to voltage drop
– current carrying capacity and short-circuit rating

- To install electrical fittings, you must first remove the cover of control board sd591

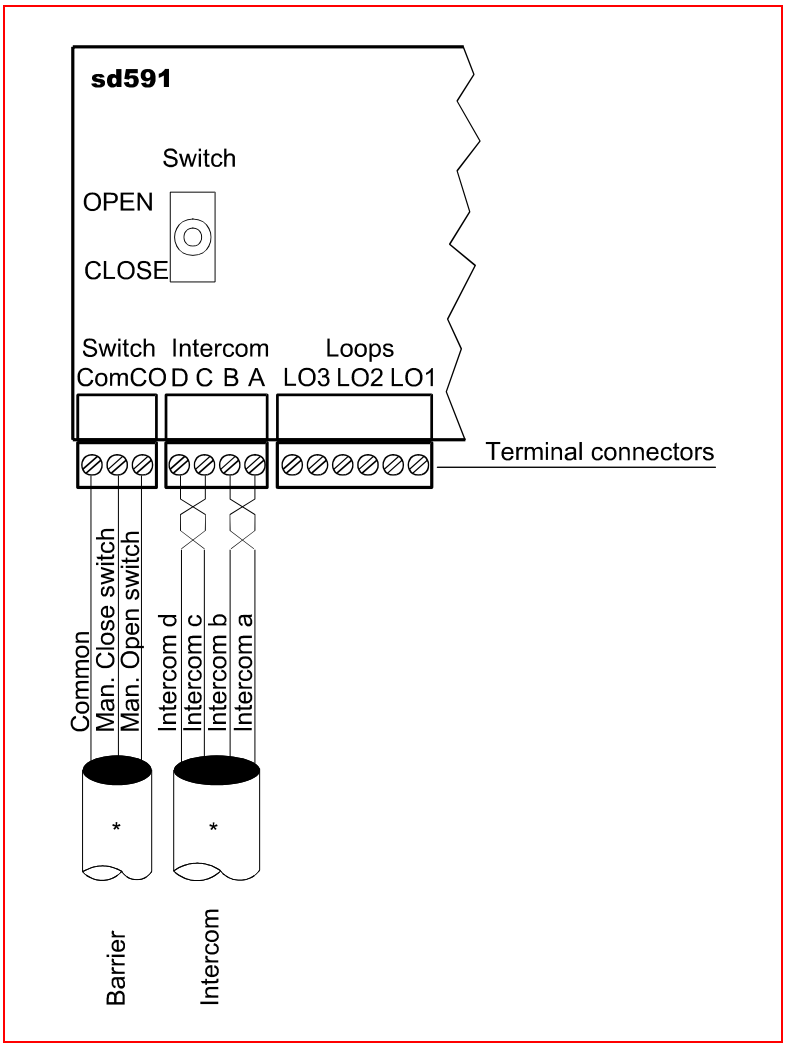
1.2.4 Cross-sectional area of cable leads

Tab. 1: Cable leads – Technical characteristics

wires	Max. torque at terminals	Rigid Solid	Flexible Twisted
*	0,22 – 0,25 Nm	0,14 – 1,5 mm²	0,14 – 1,5 mm²
**	0,5 – 0,6 Nm	0,20 – 2,5 mm²	0,20 – 2,5 mm²
***	0,22–0,25 Nm	0,14 – 1,5 mm²	0,14 – 1,0 mm²

1.2.5 Connection terminals for control lead and intercom

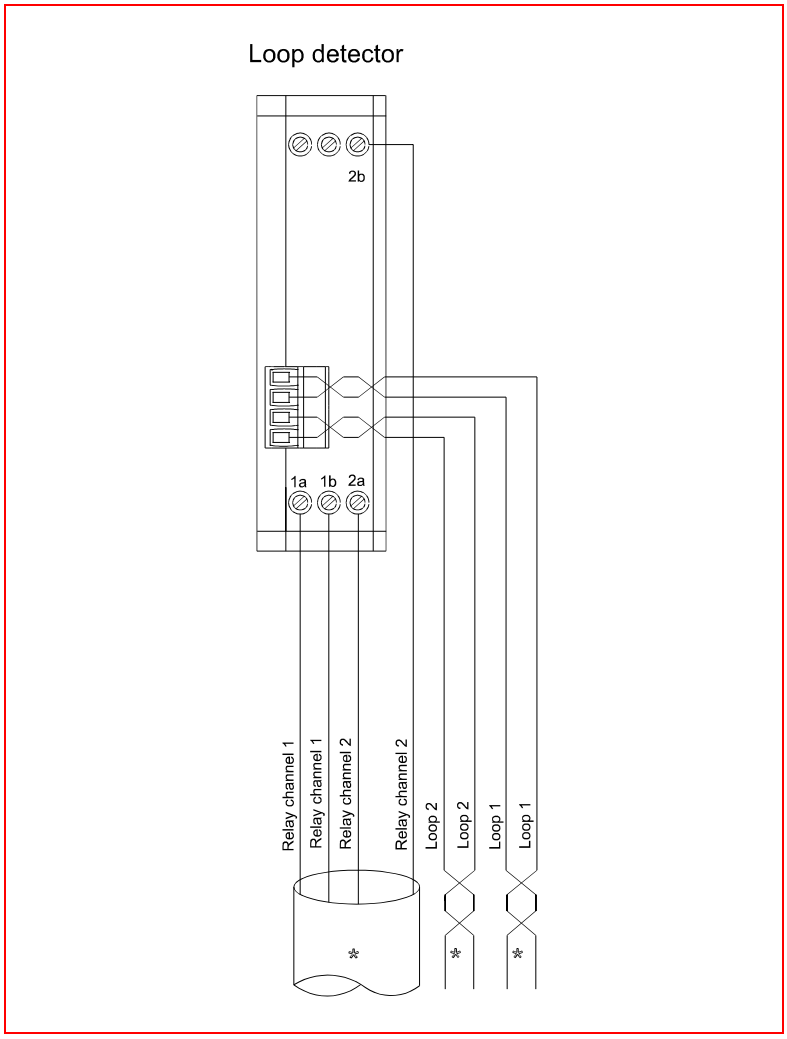
Fig. 7:
Connection terminals for control lead and intercom



* see Section 1.2.4 Cross-sectional area of cable leads

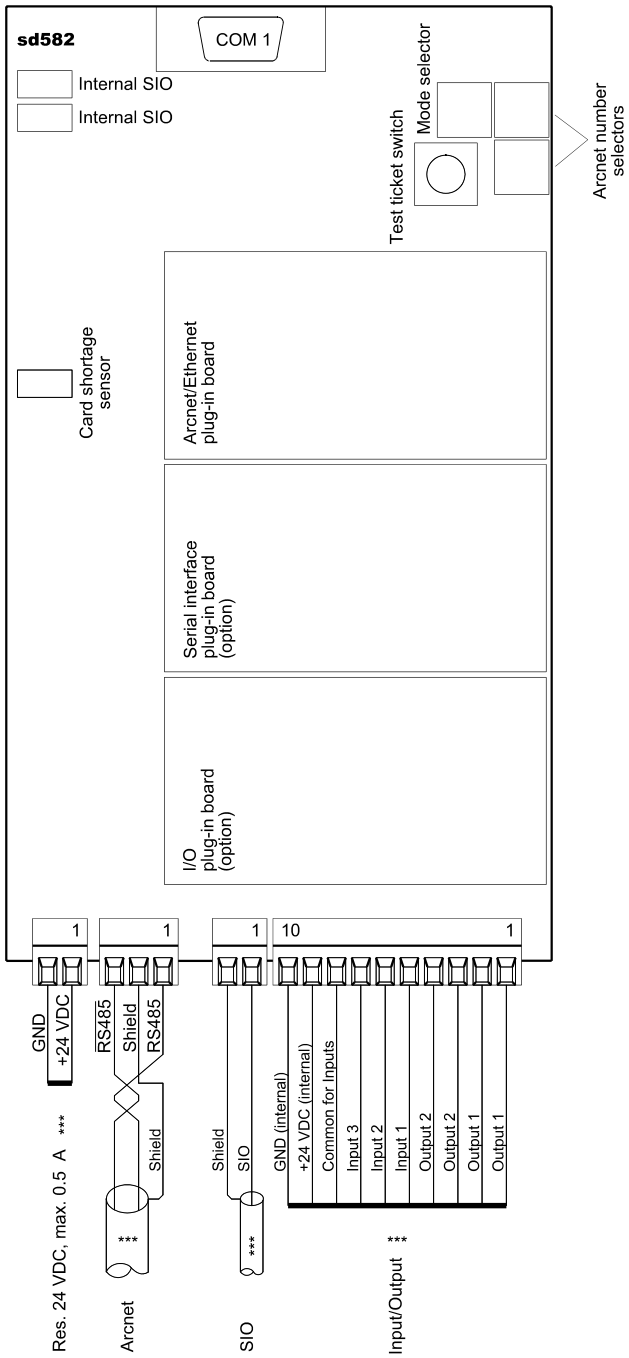
1.2.6 Connection loop detector

Fig. 8:
Connection terminals for loop detector



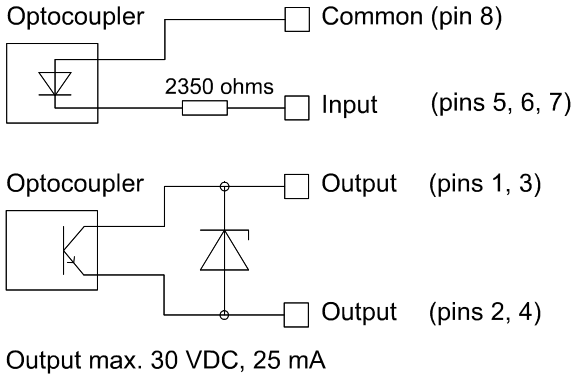
1.2.7 Connection SIO, Arcnet

Fig. 9: Connections on control board sd582



*** see Section 1.2.2 Power supply

Fig. 10:
sd582 – I/O circuit connections



Note on wire twisting:
When connecting Arcnet and loop cables, make sure that the wires are **twisted up to the connection terminal** (approx. 5 twists per 10 cm).
Shield connections must be as short as possible and insulated against contact with the chassis wall by means of a protective tube.

1.2.8 Changing the fuse

Important Note:
A blown fuse indicates a device defect that requires the attention of a **trained service technician**. The fuse must be replaced by a new one of the same type and technical characteristics (see below). Before replacing the fuse, the lead in the power distributor must be deactivated (i.e., disconnected from the mains).

Fuse characteristics:

120 VAC = 5 A–T
230 VAC = 2.5 A–T

Model:	Schurter
Type:	SPT 5x20
Time lag:	T
High breaking capacity:	H
Ceramic tube	

1.2.9 Earthing connection

The protective earth conductor of the lead must be attached to the central earthing point by way of a ring lug.

Fig. 11: Earthing point

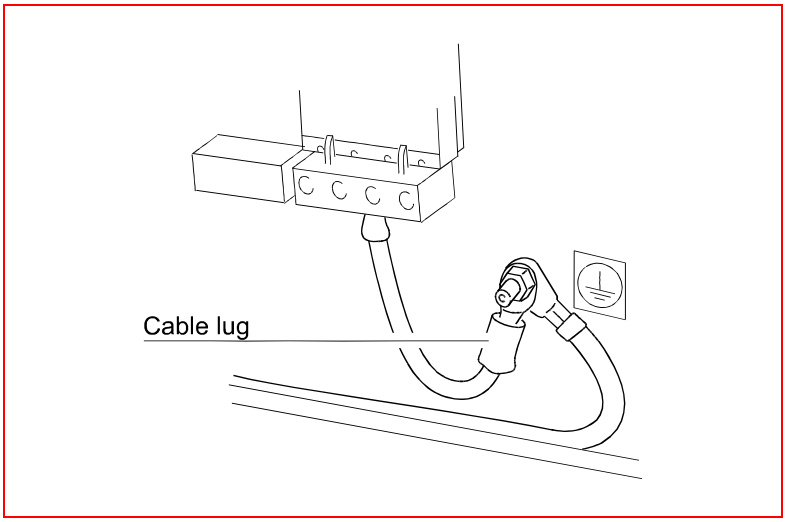
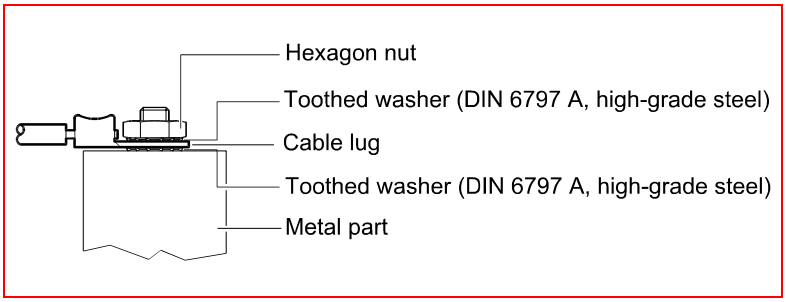


Fig. 12: Protective earth conductor

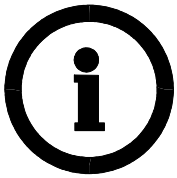


- After installation, ensure proper metal contact of all aluminium parts, i.e. the cable lug and/or metal part (check by measuring)
- If necessary, mill off any aluminium parts at the contact point to ensure proper conductivity (the resistance of the earth conductor must not exceed 0.1 Ω)

After connecting the earth conductor, proceed as follows:

- Check the strain relief clamps for proper fit
- Check to make sure the cables leading to the connection terminals are properly placed in accordance with applicable norms
- Perform a visual check of the insulation to ensure it is in proper condition

- Slightly tug at the wires to check whether the terminal screws are fastened properly
- Check to ensure the connectors are plugged in properly
- Reattach the cover of sd591
- Perform a visual check and manual inspection of the earthing connection
- Check to make sure that none of the wires are strained



Note:
If the Parking Column is powered up at temperatures below 2 °C, the control assembly will not start up to prevent possible damage. In that case, the built-in temperature control system will activate the heater (make sure that all doors are closed to allow for the device to warm up as quickly as possible).

1.2.10 Surge protection for external devices

In case additional devices (e.g., relays, controls, etc.) are installed inside the chassis (on the top-hat rail), any relay contacts and coil connections must be protected against transient voltage by means of appropriate components (e.g., diodes, RC elements, varistors, etc).

1.2.11 Weather protection

Important:
Opening the device while it is exposed to rain or snowfall may cause damage to the components inside.
To avoid moisture damage when performing installation work, you can protect the open device against moisture by means of an umbrella (see illustration below).
Before opening the device during or shortly after a rain or snow shower, use a cloth to wipe down the top cover and upper edge of the front panel to avoid moisture getting inside while opening the device.

Fig. 13:
Using an umbrella for moisture protection when performing maintenance work

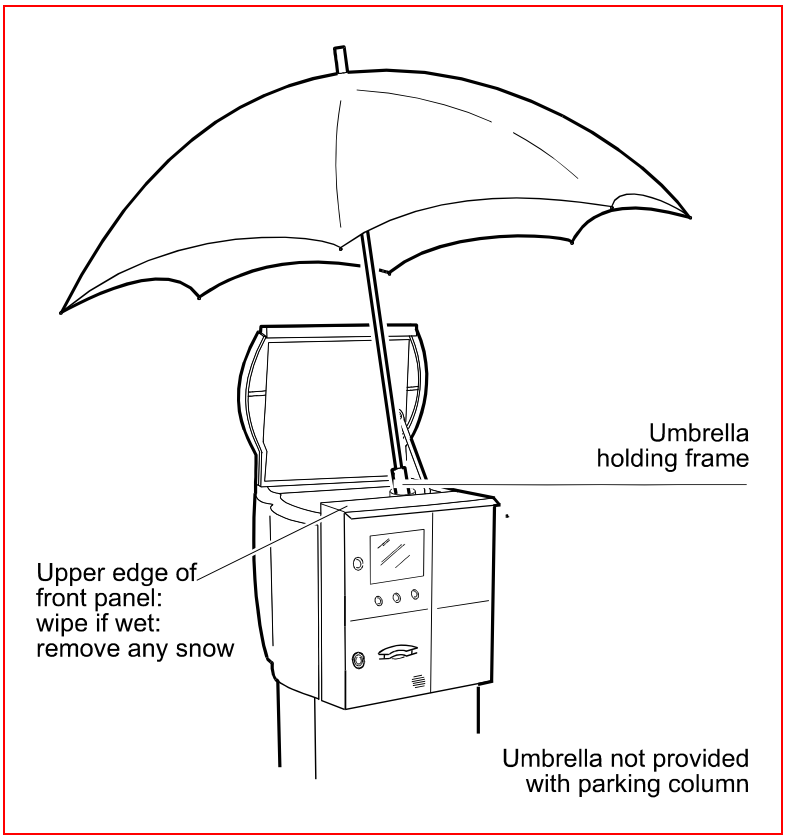
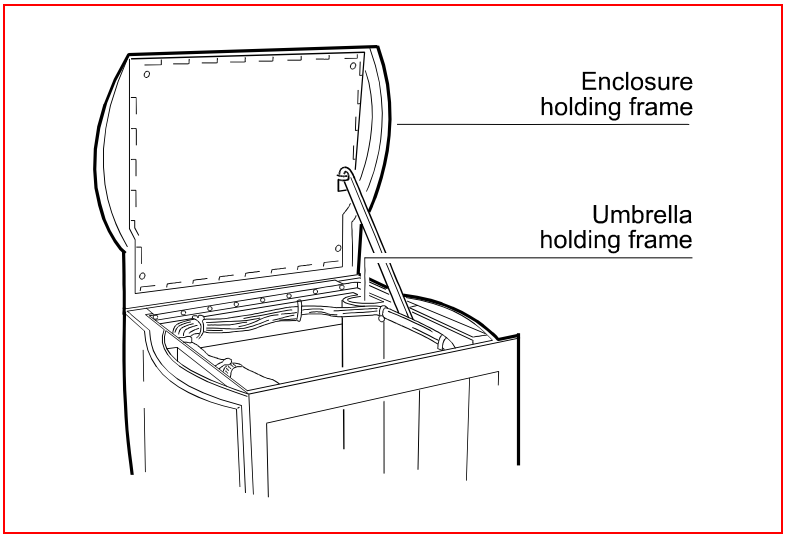
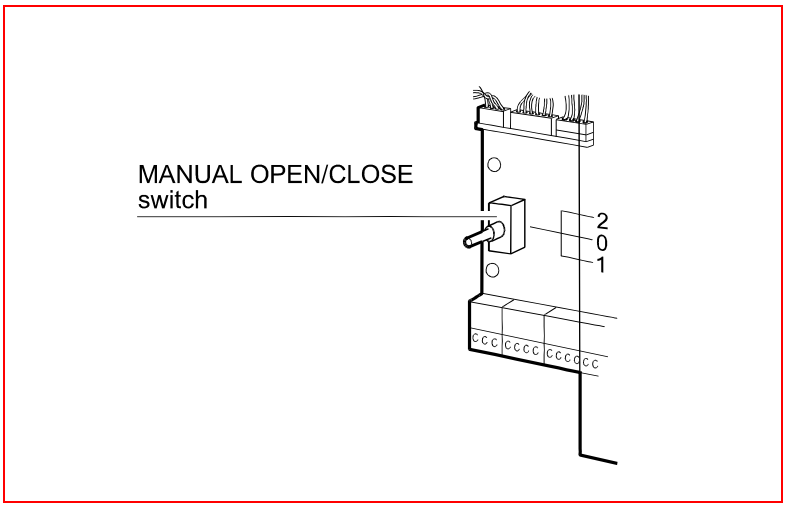


Fig. 14:
Column top – Detail: umbrella holding frame



1.2.12 MANUAL OPEN/CLOSE switch

Fig. 15:
OPEN/CLOSE switch on sd591



Switch positions

- Position 0: Normal operation
- Position 1: Keep CLOSED
- Position 2: Keep OPEN

Single gate passage

- Briefly set the switch to position 2; after the barrier opens, set it back to the 0 position
- If no vehicle passes through the gate, the barrier will close automatically after approximately ten seconds

1.2.13 Installing devices in the front panel

Fig. 16:
Installing devices in the front panel

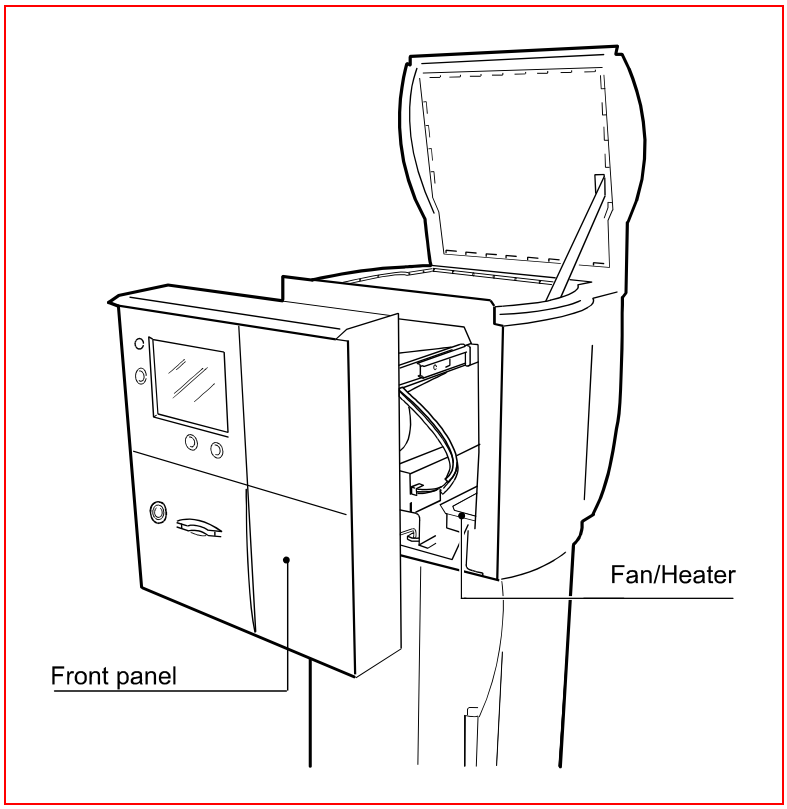
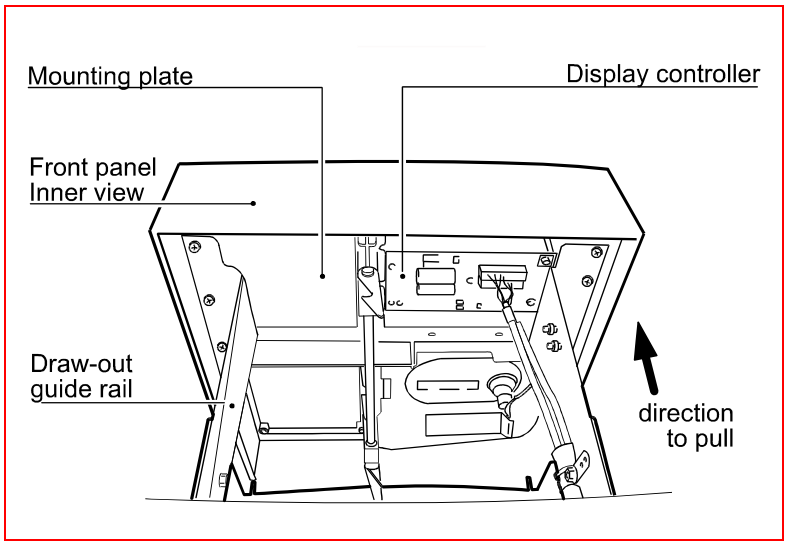


Fig. 17:
Installing devices in the front panel – inner side – Top view



Important: Devices and cables intended for subsequent installation **must** bear a CE label (EU countries) or UL/CSA label (USA; Canada) and must comply with all national and international standards and guidelines. Installation of such components may only be performed by qualified electricians.

CAUTION:
When installing devices in the front panel, ensure a minimum clearance of 5 cm above the fan/heater (see illustration).
The fan/heater must never be covered to avoid the danger of fire.

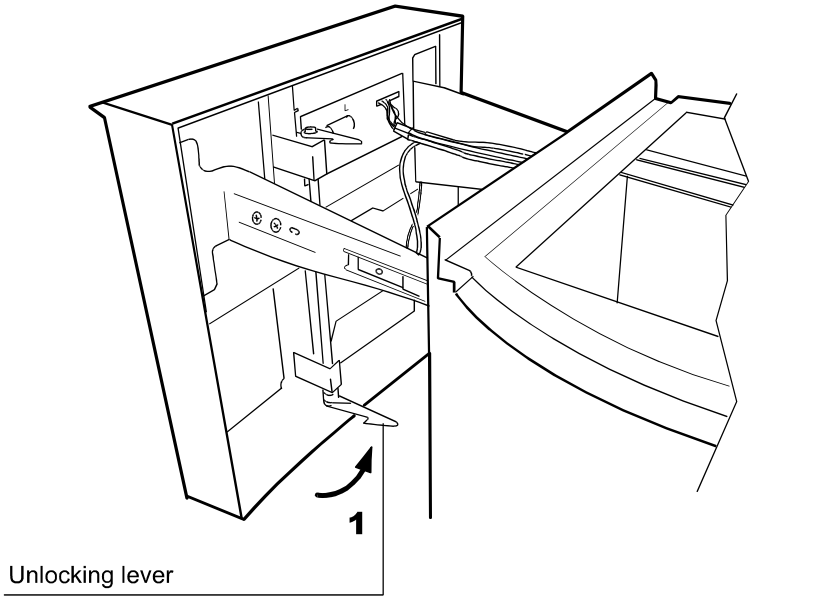
To avoid damage to the device, make sure that the fastening screws of the mounting plate are not screwed in too tightly (max. torque 0.5 Nm).

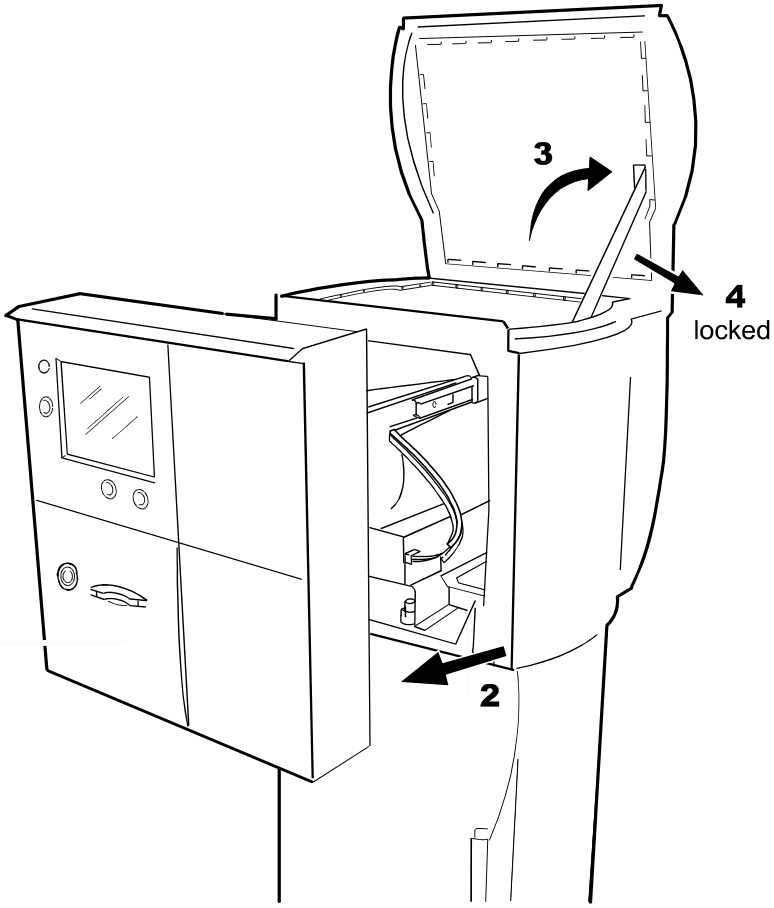
When cutting out the metal plate, make sure it is not warped, as this may cause water to leak into the device.
After installing the desired device(s), check the chassis for tightness against water and snow.

1.2.14 Opening the front panel

To open the front panel, open the column door and pull the locking lever on the inside of the chassis wall forward (see illustration).

Fig. 1: Unlocking lever





1.2.15 Closing the Parking Column

- Close the top cover and the front panel
- After locking the column door, slide the dust cover back over the lock

Important:
If the front panel is not closed tightly, water or snow may get inside the device, causing damage to the electronic assemblies.
After closing the front panel, pull at it slightly to make sure it is properly closed and locked shut.

Fig. 18:
Closing the column top section