

# Operating instructions

## Ticket terminal



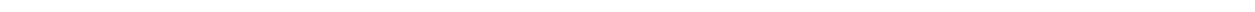
Rev 1.0



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## **1 Notes on using the operating instructions**

In this operating manual the user obtains information

- for his own safety,
- for a quicker familiarization with the functional range of the ticket terminal,
- for safe working with the ticket terminal,
- for remedying faults and
- for maintaining the ticket terminal.

In order to maintain the reliability of the ticket terminal, to increase its useful life and to prevent downtimes, observe the instructions in the operating manual.

Study the "Safety" chapter thoroughly.

The arrangements and functions of all components must be known prior to initial commissioning of the ticket terminal.

Observe the information provided in the operating manual for all works.

Moreover, always observe the applicable accident prevention and environmental protection regulations as well as the generally recognized technical rules for safe and proper working.

Feel free to contact us if there are any unresolved issues after having read the operating manual.

The illustrations in the operating manual may differ from the actual design. The factual information content remains unaffected.

### 1.1 Symbols

Particularly important information in this operating manual are marked with the following symbols:

#### 1.1.1 Symbols for personal protective equipment



Wear protective gloves.



Wear safety boots.

#### 1.1.2 Hazard symbols



##### **Danger!**

This symbol combined with the signal word indicates an imminent danger to the life and health of persons.

The texts marked with this symbol and signal word provide information on how to prevent personal injury.



##### **Warning!**

This symbol combined with the signal word indicates a danger resulting in minor to moderate injuries.

The texts marked with this symbol and signal word provide information on how to prevent personal injury.



##### **Caution!**

This symbol indicates the danger of property damage.

The texts marked with this symbol provide information on how to prevent property damage.

**If the source of danger can be clearly defined, the corresponding pictogram precedes the hazard warning:**



##### **Danger!**

Hazardous electric voltage.

This symbol indicates dangers due to electric voltage.

#### 1.1.3 Notice symbol



##### **Note**

This symbol indicates application tips or general information.



## 1.2 Validity of these instructions – name plate

This operating manual is valid for the ticket terminals (car entrance terminal, car exit terminal, RV entrance terminal, RV exit terminal) as well as outdoor-access terminal (hereinafter referred to as ticket terminal) with the following name plates:



Fig. 1-1 Name plate of car entrance terminal with barcode ticket dispenser



Fig. 1-2 Name plate of car exit terminal with ticket reader



Fig. 1-3 Name plate of RV entrance terminal with RFID ticket dispenser



Fig. 1-4 Name plate of RV exit terminal with ticket reader



Fig. 1-5 Name plate of outdoor access terminal with ticket reader

### 1.3 Limitation of liability

Beckmann GmbH is not liable with respect to the buyer of this product or to third parties for damage, loss, costs or expenses incurred as a result of accidents, misuse of the product, unauthorized changes, repairs or additions. Furthermore, Beckmann GmbH is not liable for losses, costs, malfunctions or consequential damage arising from the use of the ticket terminal. The technical data correspond to the current state at the time of printing. Printing errors, mistakes and amendments reserved.

All of the specifications and information in this manual have been compiled in due consideration of the applicable standards and regulations, the state of the art and our many years of experience and findings.

The manufacturer assumes no liability for damages resulting from:

- the non-observance of these operating instructions
- improper use
- the deployment of unqualified personnel
- unauthorised alterations
- technical changes
- the use of non-approved spare and wear parts
- vandalism

The actual scope of delivery may differ from the descriptions and illustrations in this manual in case of special designs, when making use of additional order options or due to the latest technical modifications.

Apart from that, the obligations agreed upon in the delivery contract, the general terms and conditions as well as the manufacturer's delivery conditions and the legal provisions valid upon conclusion of the contract apply.

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## 2 Technical information

### 2.1 Functional description

The ticket terminals are used for databased entrance and exit control of pedestrians and vehicles. For this purpose, tickets are printed at the entrance terminal and an opening signal is sent to the barrier or turnstile controller.

At the exit terminal or the outdoor access terminal, the entered ticket is read. The associated entry time is retrieved from the connected database. If there are no unpaid costs, an opening signal is sent to the barrier or turnstile controller. The ticket can be swallowed at the exit terminal or the outdoor access terminal.

For special openings of the barrier or turnstile (for example, authorized, free access or entry for employees, technical staff and residents) RFID hard plastic cards can be inserted into the reader. If the card is authorized, an opening signal is sent to the barrier or turnstile controller and the card is returned to the operator.

### 2.2 Equipment

The ticket terminal is available in the following basic versions:

- **entrance terminal for car-parkings with barriers**  
barcode ticket printer and RFID-reader, height 1.100mm
- **exit terminal for car-parkings with barriers**  
barcode reader and RFID-reader, height 1.100mm
- **entrance terminal for RV-parkings with barriers**  
RFID ticket dispenser and RFID-reader, height 1.300mm + 400mm pillar
- **exit terminal for RV-parkings with barriers**  
RFID-reader, height 1.300mm + 400mm pillar
- **outdoor access terminal for turnstiles, doors and gates**  
barcode reader and RFID-reader, height 1.100mm

Every ticket terminal is equipped with:

- LED-illumination
- outdoor package with heating

The following options are available per terminal:

- weighing sensor for the dynamic determination of the remaining ticket quantity (%)
- integrated VoIP intercom
- turning console when installed near the wall (turn by 80 ° CCW)
- additional pillar for height extension - 400mm, e.g. for trucks

The following options are available to realize direct payment at the exit terminal:

- additional terminal for coin/ token payment, placed beside OR
- credit card terminal for pinless micropayments

## 2.3 Technical data

Tab. 2-1 Technical data entrance terminal for car-parkings t

Parameter	Value	
Type designation	CAR entrance terminal	
Energy supply	230V AC, 50 Hz	
Power consumption	Maximum (incl. heating)	300 VA
Number of relay outputs	4 x	
Load per relay	resistive load (cos phi =1)	
Rated load per relay	16 A at 250 V AC	
Rated continuous current per relay	16 A	
Max. switching current per relay	16 A	
Max. switching voltage per relay	440 VAC	
Max. switching power per relay	4.000 VA	
Material of housing	Stainless steel V2A <sup>1)</sup>	
Temperature area of application	-20 to +40 °C at 30 to 70% r.H.	
Type of protection	IP22	
Dimensions (height x width x depth)	1.100 mm x 260 mm x 275 mm	
Weight (not filled)	30 kg	
Approved RFID-cards (for special functions)	Order-No.	00001809 00003457 00003458 00003459
Approved barcode-tickets (printing & dispensing)	Order-No.	12500313
Capacity of ticket-cartridge	5.000 pieces	

1) Optional special paint must be used for use near the coast / seawater / aggressive atmospheres

Tab. 2-2 Technical data exit terminal for car-parkings

Parameter	Value
Type designation	CAR exit terminal
Energy supply	230V AC, 50 Hz
Power consumption	Maximum (incl. heating) 300 VA
Number of relay outputs	4 x
Load per relay	resistive load (cos phi =1)
Rated load per relay	16 A at 250 V AC
Rated continuous current per relay	16 A
Max. switching current per relay	16 A
Max. switching voltage per relay	440 VAC
Max. switching power per relay	4.000 VA
Material of housing	Stainless steel V2A <sup>1)</sup>
Temperature area of application	-20 to +40 °C at 30 to 70% r.H.
Type of protection	IP22
Dimensions (height x width x depth)	1.100 mm x 260 mm x 275 mm
Weight (not filled)	30 kg
Approved RFID-cards (for special functions)	Order-No. 00001809 00003457 00003458 00003459
Approved barcode-tickets (reading)	Order-No. 12500313

1) Optional special paint must be used for use near the coast / seawater / aggressive atmospheres

Tab. 2-3 Technical data entrance terminal for RV-parkings

Parameter	Value
Type designation	RV entrance terminal
Energy supply	230V AC, 50 Hz
Power consumption	Maximum (incl. heating) 450 VA
Number of relay outputs	4 x
Load per relay	resistive load (cos phi =1)
Rated load per relay	16 A at 250 V AC
Rated continuous current per relay	16 A
Max. switching current per relay	16 A
Max. switching voltage per relay	440 VAC
Max. switching power per relay	4.000 VA
Material of housing	Stainless steel V2A <sup>1)</sup>
Temperature area of application	-20 to +40 °C at 30 to 70% r.H.
Type of protection	IP22
Dimensions (height x width x depth)	1.300 mm x 260 mm x 275 mm
Weight (not filled)	32 kg
Approved RFID-cards (for special functions)	Order-No. 00001809 00003457 00003458 00003459
Approved RFID-tickets (printing & dispensing)	Order-No. 12500315
Capacity of ticket-cartridge	2.000 Stck

1) Optional special paint must be used for use near the coast / seawater / aggressive atmospheres

Tab. 2-4 Technical data exit terminal for RV-parkings

Parameter	Value
Type designation	RV exit terminal
Energy supply	230V AC, 50 Hz
Power consumption	Maximum (incl. heating) 300 VA
Number of relay outputs	4 x
Load per relay	resistive load (cos phi =1)
Rated load per relay	16 A at 250 V AC
Rated continuous current per relay	16 A
Max. switching current per relay	16 A
Max. switching voltage per relay	440 VAC
Max. switching power per relay	4.000 VA
Material of housing	Stainless steel V2A <sup>1)</sup>
Temperature area of application	-20 to +40 °C at 30 to 70% r.H.
Type of protection	IP22
Dimensions (height x width x depth)	1.300 mm x 260 mm x 275 mm
Weight (not filled)	32 kg
Approved RFID-cards (for special functions)	Order-No. 00001809 00003457 00003458 00003459
Approved RFID-tickets (reading)	Order-No. 12500315

1) Optional special paint must be used for use near the coast / seawater / aggressive atmospheres

Tab. 2-5 Technical data outdoor access terminal

Parameter	Value
Type designation	Outdoor access terminal
Energy supply	230V AC, 50 Hz
Power consumption	Maximum (incl. heating) 300 VA
Number of relay outputs	4 x
Load per relay	resistive load (cos phi =1)
Rated load per relay	16 A at 250 V AC
Rated continuous current per relay	16 A
Max. switching current per relay	16 A
Max. switching voltage per relay	440 VAC
Max. switching power per relay	4.000 VA
Material of housing	Stainless steel V2A <sup>1)</sup>
Temperature area of application	-20 to +40 °C at 30 to 70% r.H.
Type of protection	IP22
Dimensions (height x width x depth)	1.100 mm x 260 mm x 275 mm
Weight (not filled)	30 kg
Approved RFID-cards (for special functions)	Order-No. 00001809 00003457 00003458 00003459
Approved barcode-tickets (reading)	Order-No. 12500313

1) Optional special paint must be used for use near the coast / seawater / aggressive atmospheres



2.3.1 Dimensions

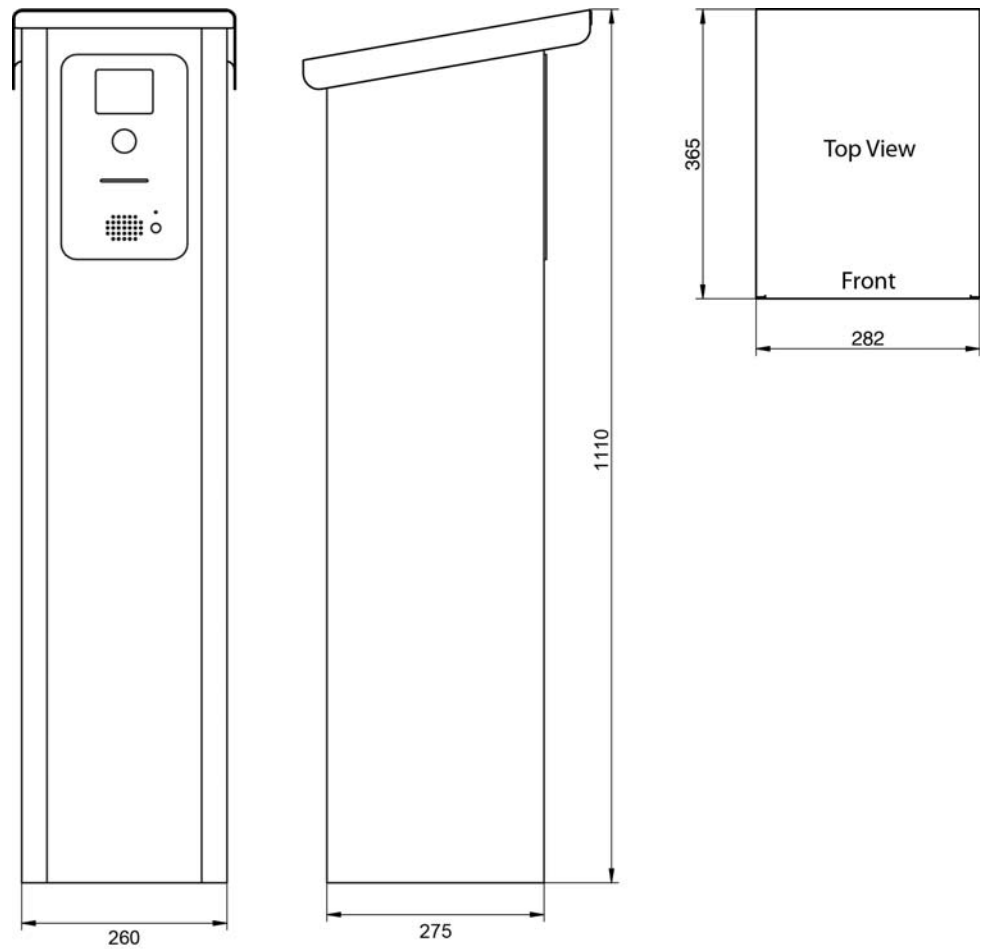


Fig. 2-1 Dimensions CAR entrance / exit terminal and outdoor access terminal

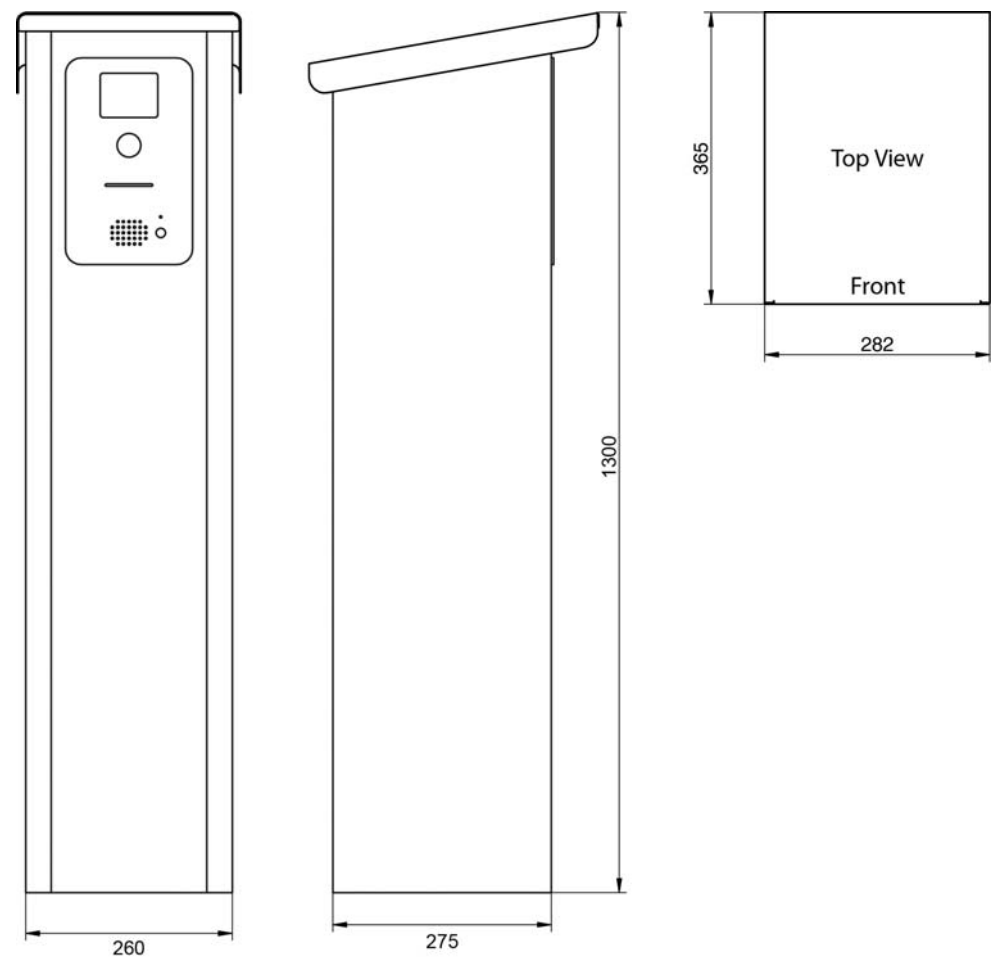


Fig. 2-2 Dimensions RV entrance / exit terminal

2.4 Device depiction

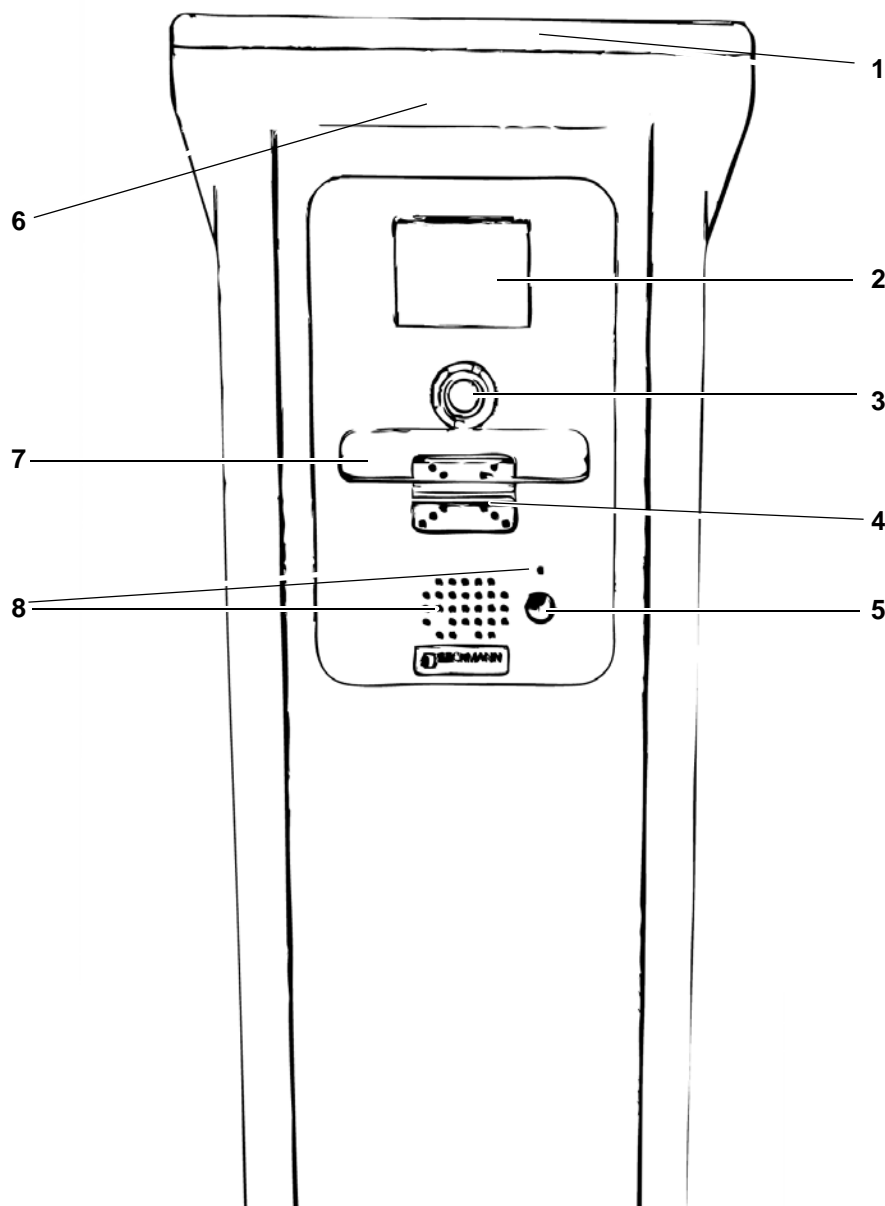


Fig. 2-3 Front view of the entrance, exit and access terminal

No.	Designation
1	Lid
2	Display
3	Ticket request button with LEDs (only at entrance)
4	Ticket input / output slot with LEDs
5	Call button (active with option intercom)
6	LED-illumination of front
7	Rain deflector
8	Speaker and microphone (only with option intercom)

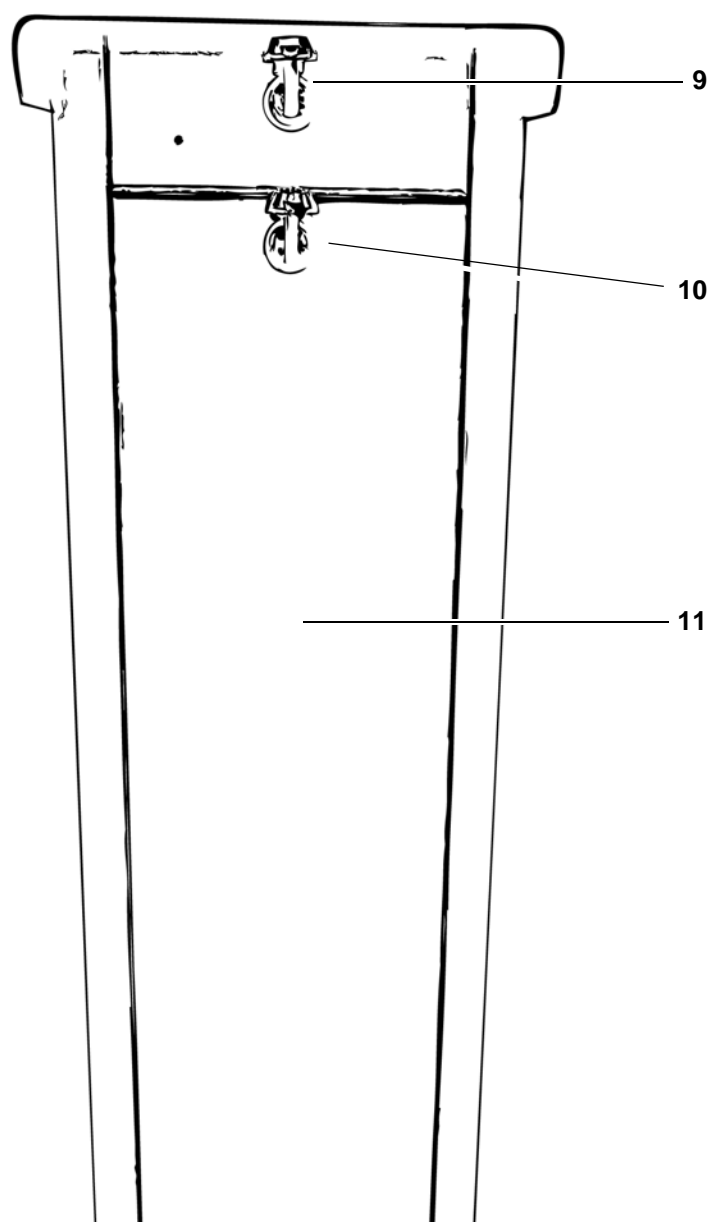


Fig. 2-4 Rear view of the entrance, exit and access terminal

No.	Designation
9	Lock (lid)
10	Lock (rear cover)
11	Rear cover

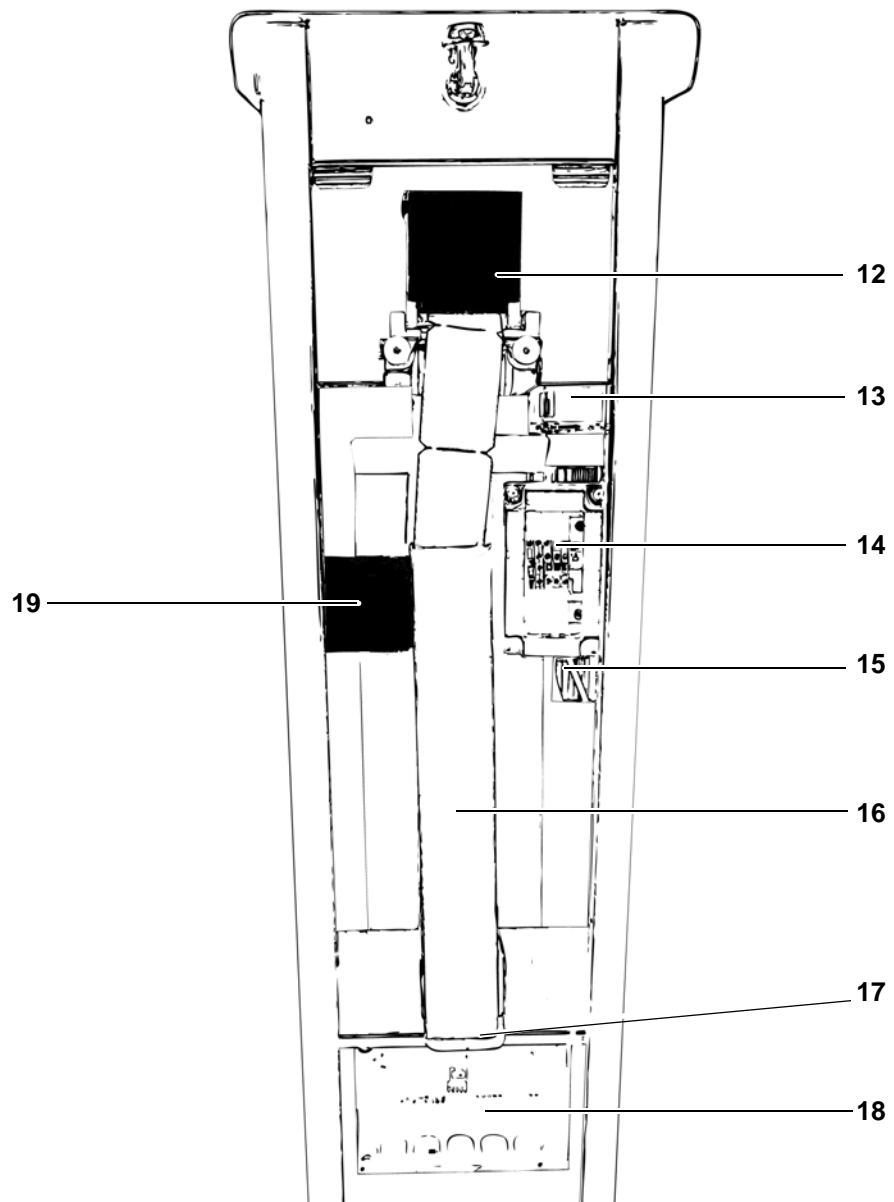


Fig. 2-5 Interior view of the entrance terminal (from back side)

No.	Designation
12	Motor reader-printer unit
13	Fan
14	Connection Isobox Power supply & main switch
15	Power adapter
16	Ticket-fanfold-cartridge
17	Weighing sensor (only with option load cell)
18	Connection Isobox Data I/O
19	Heating

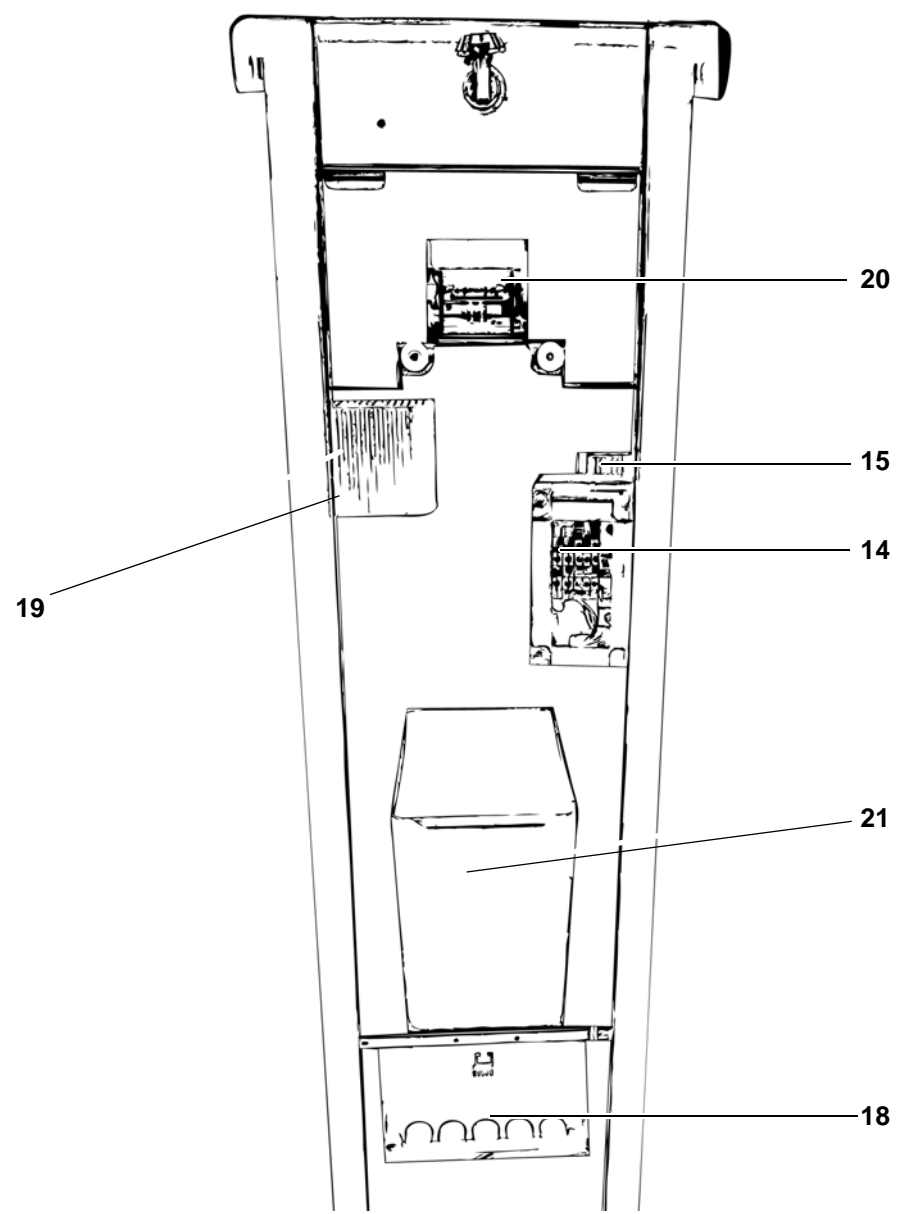


Fig. 2-6 Interior view of the exit and access terminal (from back side)

No.	Designation
14	Connection isobox power supply & main switch
15	Power adapter
18	Connection Isobox Data I/O
19	Heating
20	Motor reader
21	Container for withdrawn tickets

## 3 Safety

This device complies with the relevant safety regulations for measuring and control technology and has been constructed in accordance with state-of-the-art technology and the recognised safety rules and regulations. Nevertheless, its use may result in danger for life and limb of the user or third parties or cause damage to the device and other assets.

Only use this device in perfect condition, in accordance with regulations, fully aware of safety and dangers and observing these operating instructions!

Have all faults, especially those which may jeopardise safety, repaired immediately!

In addition to the operating manual also observe the generally applicable legal and other binding accident prevention and environmental protection regulations!

Do not change or modify the ticket terminal without prior consent of the manufacturer!

Spare parts must meet the requirements specified by the manufacturer! This is only guaranteed when using original spare parts.

Observe the deadlines for recurring maintenance intervals specified in this operating manual!

Ensure the safe and environmentally sound disposal of plastic parts and electronic replacement parts!

### 3.1 Intended use

The ticket terminals issue tickets and accept tickets. For this application, the approved tickets of Beckmann GmbH or tickets that meet the specifications of Beckmann GmbH are to be used for specific applications.

The ticket terminals are also intended to signalize authorized opening requests to external barrier control units or turnstile control units.

The final decision and control of whether and when a barrier boom is opened or closed may only be made via suitable, external certified barrier control devices. These external controllers must comply with all applicable directives and applicable standards and regulations in the site.

Externally connected barrier systems or turnstiles and their control units are not part of the Beckmann system. In particular, their selection, suitability, installation, commissioning, maintenance, operation and all associated hazards are not affected by Beckmann GmbH. This also applies to the planning, installation and maintenance of the associated external induction loops and light barriers.

Intended use also includes the observance of these operating instructions and maintenance intervals.

### **3.2 Improper use**

Any use of the ticket terminal other than described in chapter 3.1 is considered to be improper use. Direct control of barriers, turnstiles or their motors is prohibited.



### 3.3 Personnel requirements

The ticket terminal may only be operated by personnel who have been instructed by either Beckmann GmbH or authorised specialist companies, their service partners or the operator and who have read and understood the operating manual.

#### Electrically skilled person

Electrically qualified personnel must be able to read and understand electric circuit diagrams, to commission and maintain electrical systems, to wire switch and control cabinets, to install controlling software, to ensure proper functioning of electrical components and to identify possible hazards in the work with electric and electronic systems.

#### Instructed person

Instructed persons were informed of the tasks assigned to them as well as of potential hazards of inappropriate behaviour by the operator. The device is to be maintained and looked after by instructed personnel.

Tab. 3-1 Overview of the minimum required personnel qualifications

Activities	Instructed persons	Electrically skilled person
Transportation	X	
Assembly, mounting	X	
Electrical installation		X
Start-up		X
Shutdown	X	
Disassembly	X	
Electrical deinstallation		X
Cleaning	X	
Maintaining <sup>1)</sup>	X <sup>1)</sup>	X
Troubleshooting and repair		X
Disposal	X	

<sup>1)</sup>Instructed persons may only carry out a check of the residual current device with the test button during maintenance.

### 3.4 Operator responsibilities

The operator is responsible for the regular assignment of safety-related checks, maintenance and service tasks. The operator must also ensure that the personnel has been trained in working with the device and that this operating manual is available at the operating site at all times. The operator must only use this device as intended. The operator may only use this device in perfect condition, this condition is to be checked at regular intervals. In case of any deviations operation is to be stopped immediately.

All faults, especially those which may jeopardise safety, have to be repaired immediately.

The operator has to fulfil the legal obligations in terms of occupational safety. In addition to the information on occupational safety provided in this manual the national safety, accident prevention and environmental protection regulations applicable for the field of application must be complied with.

### 3.5 Safety information

**Danger!**

Risk of death due to electrical voltage!

The ticket terminal must be de-energized before undertaking any work.

**Warning!**

Danger of minor injuries due to sharp edges or falling objects!

Wear your personal protective equipment.

**Caution!****Property damage owing to the use of wrong cleaning agents**

Only use the cleaning agents specified in the maintenance chapter to clean the ticket terminal!

Never use a high-pressure cleaner to clean the ticket terminal!

### 3.6 Residual risks

By setting up the ticket terminal in a public place, the following residual risks arise:

**Danger!**

Risk of death due to electrical voltage!

Never leave minors in the vicinity of the ticket terminal without supervision!

**Caution!**

Property damage due to incorrect operation.

Do not operate the ticket terminal with tools or other objects. Do not try to change or fix something on the ticket terminal. If the ticket terminal does not work properly, inform the operator immediately!

**Caution!**

Property damage due to improper use

The ticket terminal is not suitable for a connection to devices which are outside the intended use.

When connecting a non-intended device, the ticket terminal and the connected device can be damaged.

### 3.7 Safety signs and labels at the ticket terminal

The following safety signs and labels at the ticket terminal are to be checked on a regular basis. If they are illegible, they must be replaced:

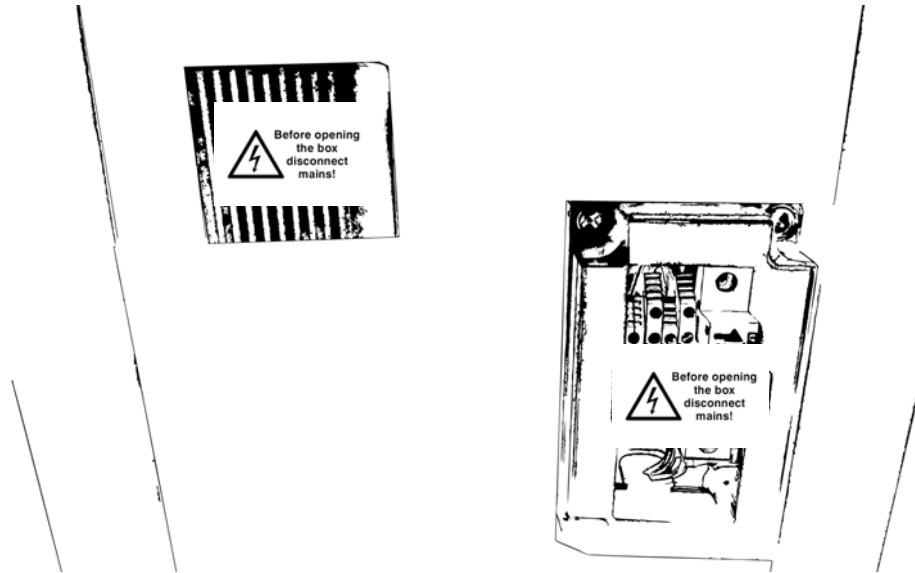



Fig. 3-1 Warning signs on heating and cover of connection isobox power supply

Warning sign	Designation
	<p>Danger high voltage! Before opening the box/cover disconnect the mains!</p>

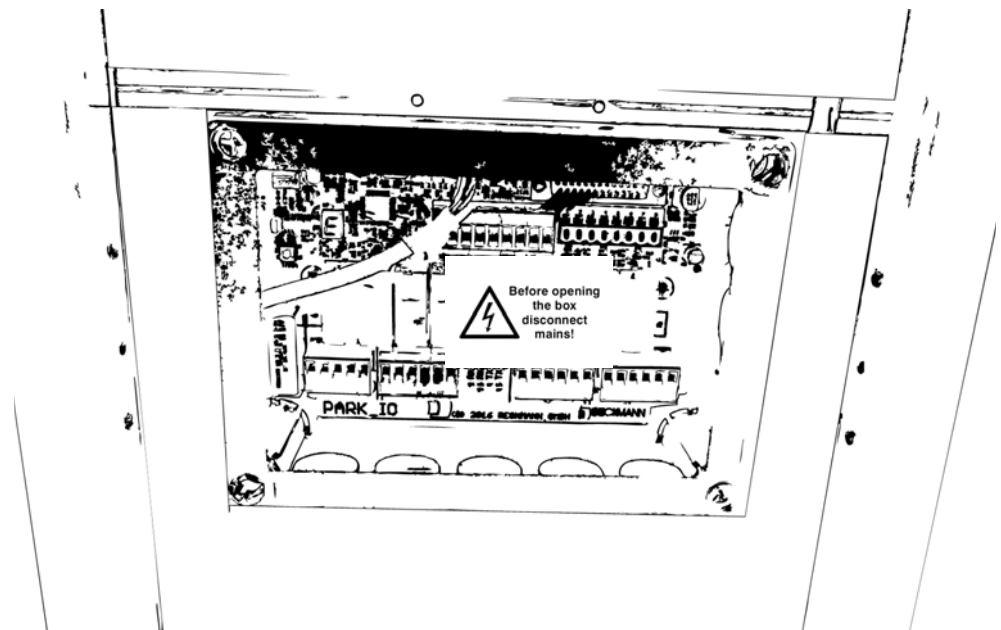



Fig. 3-2 Warning sign on cover of connection isobox data I/O

Warning sign	Designation
	<p>Danger high voltage! Before opening the box/cover disconnect the mains!</p>



## 4 Transport and storage

After delivery check the ticket terminal for visible transport damages and immediately report these to the supplier and Beckmann GmbH.

### 4.1 Scope of delivery

The ticket terminal delivery consists of the following components:

- ticket terminal
- 3 keys for ticket terminal
- base plate (optional)
- thermal resistive paper tickets (optional)
- RFID-cards for special functions e.g. barrier opening (optional)
- RFID-Mastercard (optional)
- additional terminal for coin payment (optional)
- swivel bracket (optional)

### 4.2 Transportation

The ticket terminal is to be transported by 2 people as closely as possible to the installation site.

### 4.3 Storage

Store all components of the ticket terminal dry and covered at an ambient temperature of +10 to +40 ° C to prevent the ingress of moisture into the interior of the components.

Protect the stainless steel parts against contamination / corrosive foreign particles and aggressive atmospheres. Pay special attention to the care instructions for stainless steel (see appendix).

Store optional consumables / paper tickets separately at constant room temperature (+23 to -5 °C) and a relative humidity of 50% to -10%. Avoid exposure to direct UV and sunlight, contact with harsh chemicals and in aggressive atmospheres.





## 5 Set-up and installation

Before set-up and installation read the safety chapter.

### 5.1 Instructions for unpacking

- Remove the packing material from all parts.

### 5.2 Safety measures prior to installation

- Disconnect the power supply line from the mains.
- Disconnect all related devices (e.g. barrier or turnstile) from the mains.

### 5.3 Requirements at the installation site

The following requirements must be satisfied before set-up and installation of the ticket terminal:

- The foundation is prepared according to the specifications from Beckmann GmbH.
- The base plate is already embedded in the foundation.
- The foundation is level.
- The threaded rods are free of dirt.
- The load capacity of the subsoil is sufficiently dimensioned (see device weight, chapter 2.3).
- The supply, data and network cables are laid and prepared in accordance with the specifications of Beckmann GmbH (see chapters 5.3.1, 5.3.2 and 5.3.3).
- The electrical protection (RCBO) must be provided by site.
- Do not scatter salt in the immediate area of the stainless steel housing. Avoid working with the cutting disc / sanding dust near the stainless steel housing, this inevitably leads to punctiform corrosion spots (extraneous rust, pitting corrosion) on the surfaces. Do not place the stainless steel housing in aggressive environments, e.g. seawater atmosphere or sulphurous / chlorine-containing air. Observe the further care instructions of the stainless steel housing, see appendix.

### 5.3.1 Foundation



**Note!**

Place protective caps on top of the threaded rods before pouring the foundation.

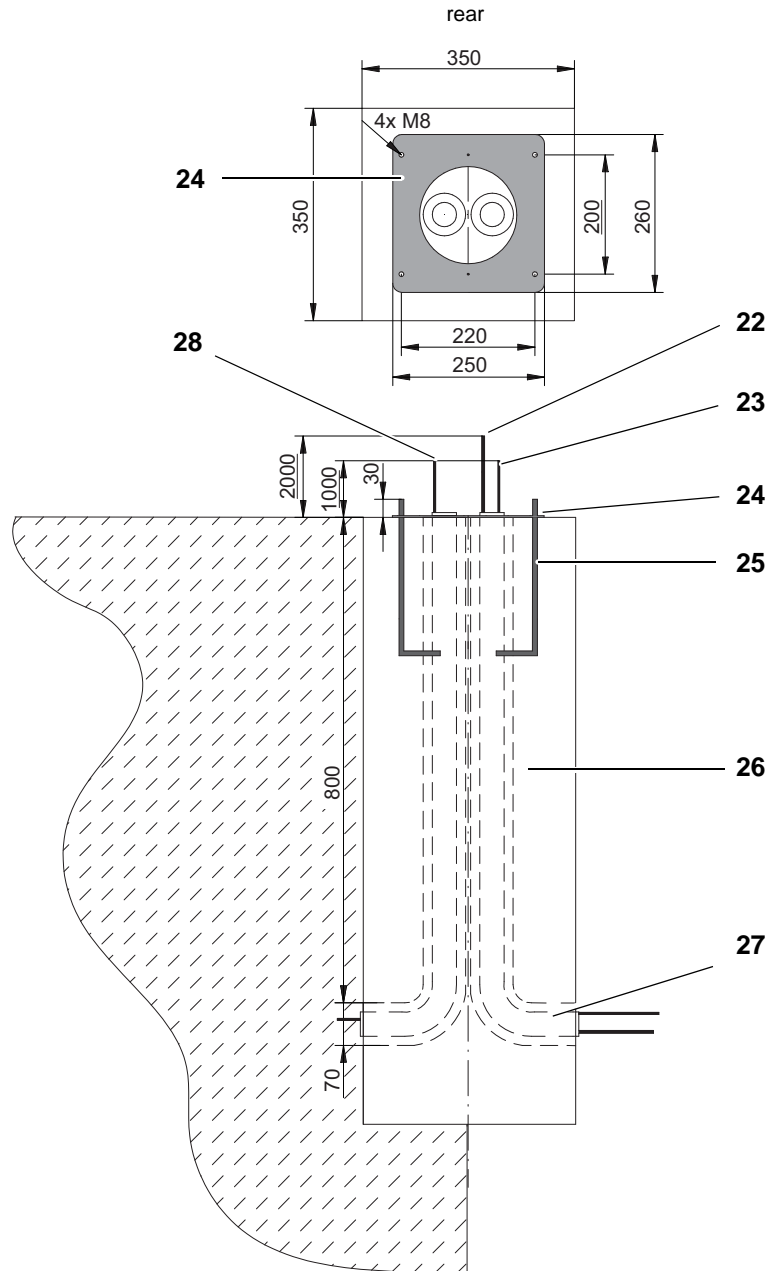


Fig. 5-1 Foundation ticket terminal

No.	Designation	No.	Designation
22	network data cable CAT7	27	cable conduit M50
23	power supply line 230 V AC	28	signal cables I/O to barrier controller
24	base plate (optional)		
25	threaded rods M 8 (optional)		
26	concrete base		

5.3.2 Cable plan car entrance/ exit terminal

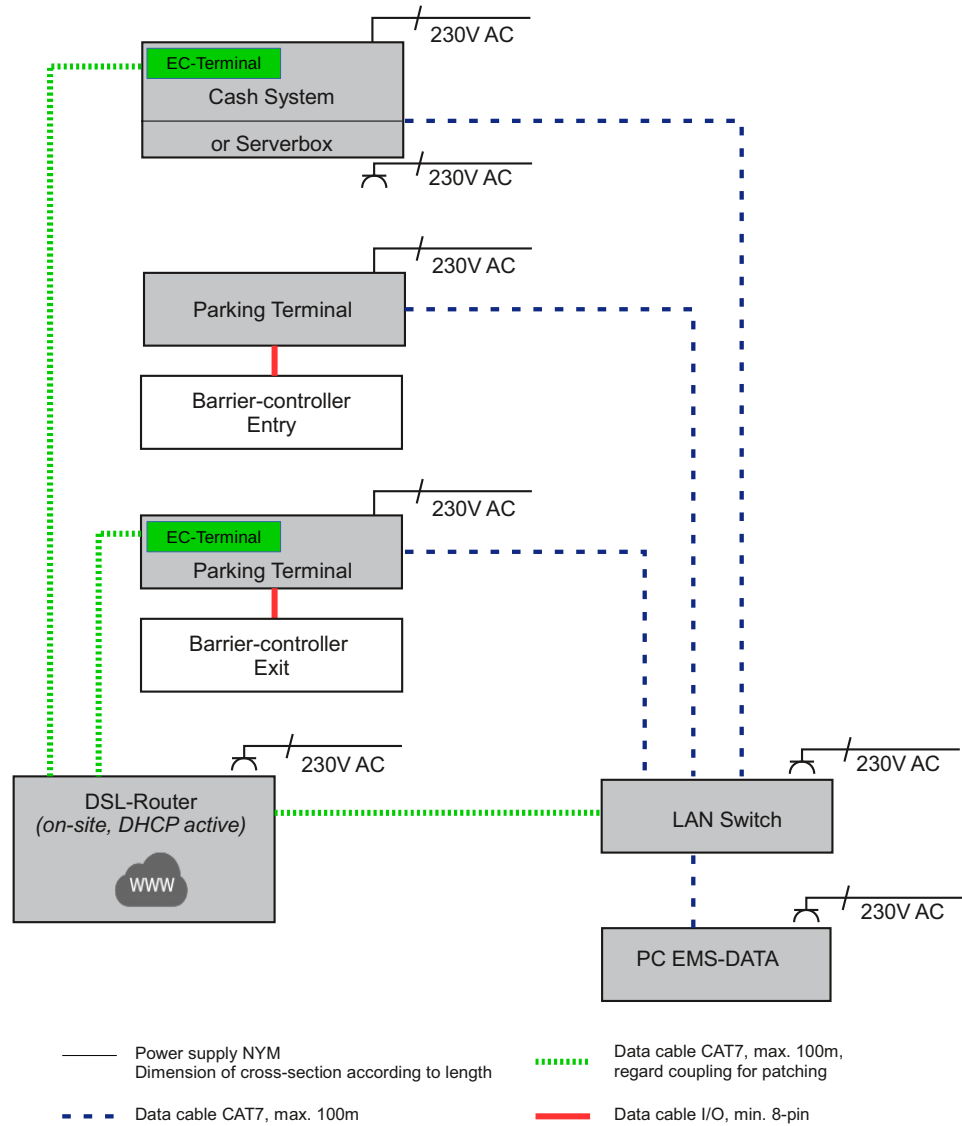


Fig. 5-2 Cable plan car entrance/ exit terminal with max. configuration

5.3.3 Cable plan access control

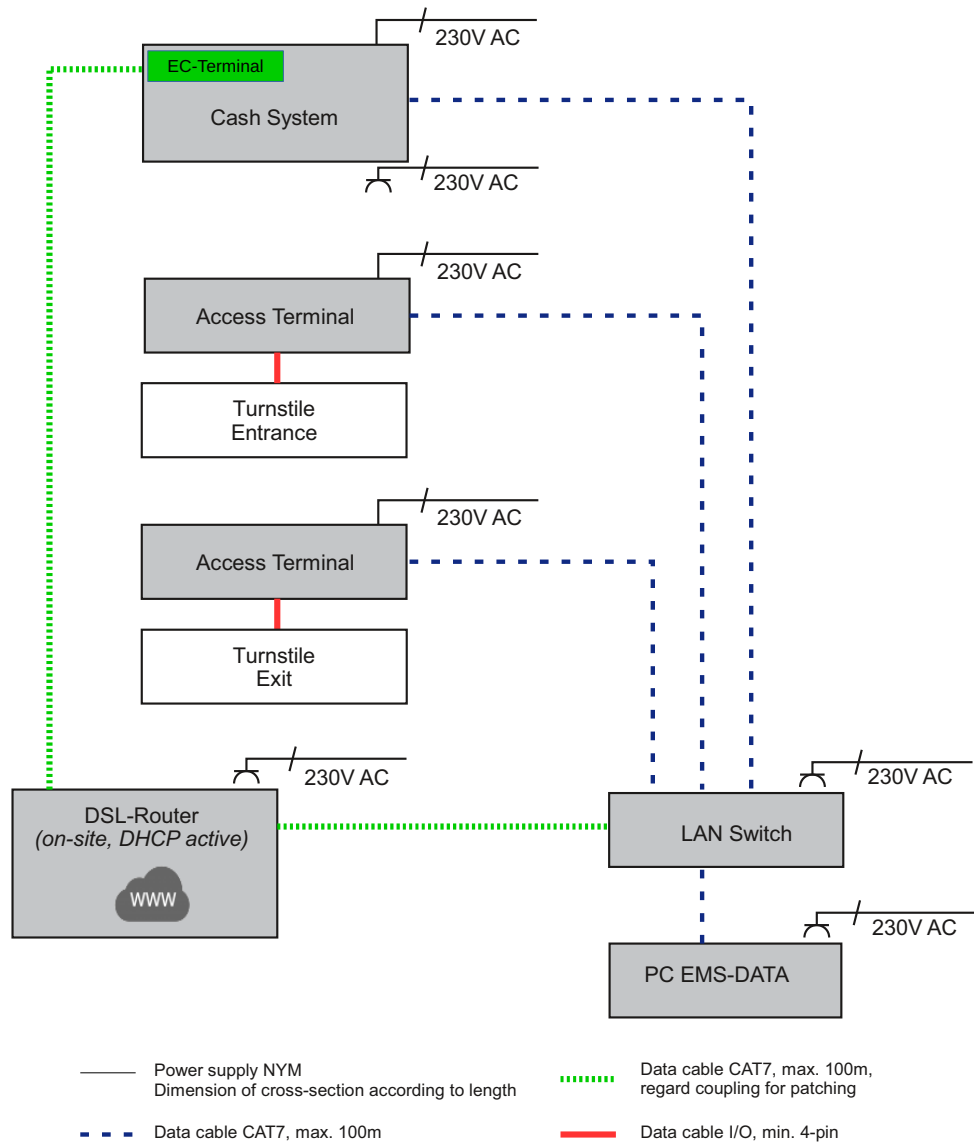


Fig. 5-3 Cable plan access control with max. configuration

## 5.4 Installation

Requirements:

- The supply line is de-energized.
- The supply, data and network cables are laid and prepared in accordance with Beckmann GmbH specifications (see chapters 5.3.1, 5.3.2 and 5.3.3).
- The residual current device (RCBO) must be provided on site.
- Main switch and residual current device (RCBO) are switched off.
- The foundation is cleaned.
- The base plate is fitted to the foundation.
- The required tools are ready for use:

Tool	Type/size
slotted screwdriver	4,5x125
Phillips screwdriver	PH2 large
Phillips screwdriver	3,5x100, small
torx screwdriver	TX20
stripping tool	
spanner/ socket	13-mm

1. Open the lock cover, insert the key and open the lock (180 ° key rotation) of the rear cover.

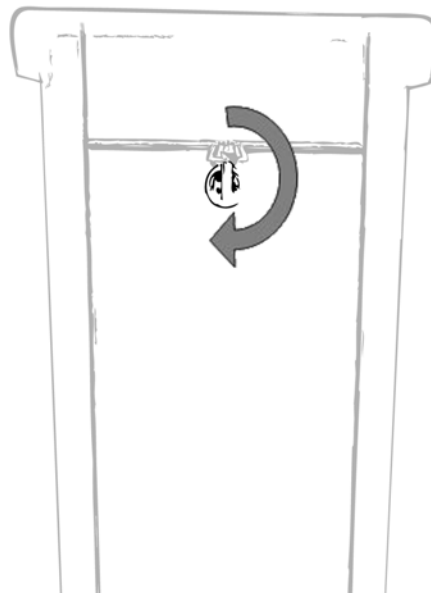


Fig. 5-4 Unlock of the rear cover

2. Pull the unlocked rear cover toward you first and then lift the cover out of the guide.

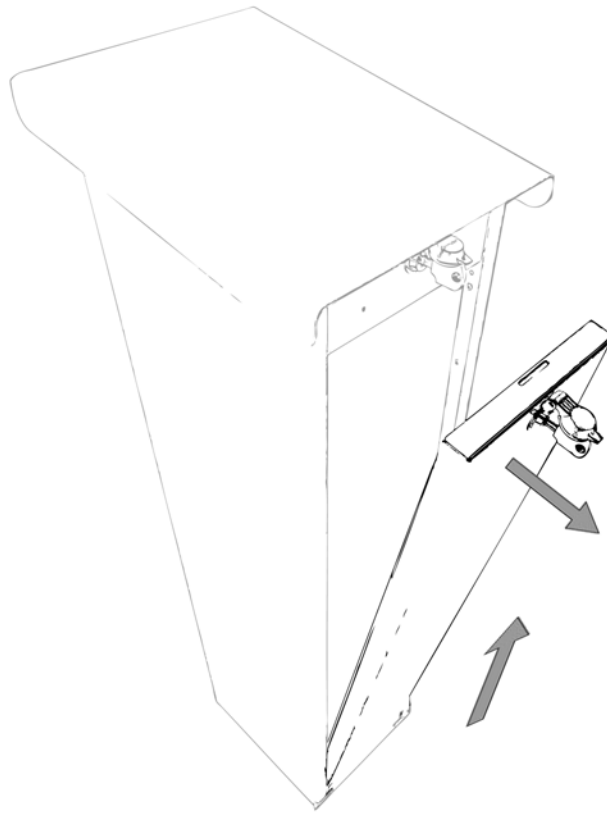


Fig. 5-5 Removing the rear cover



### Note!

When it rains, cover the top section of the tower to prevent water from entering the housing.



### Warning!

Danger of minor injuries due to sharp edges or falling objects!  
Wear your personal protective equipment.



3. Remove the cover and put it aside for later.
  - In the later course of the installation a second person is required.

4. Together lift the tower up onto the base plate.
5. First, set the tower up in a tilted position, so it can be held unproblematically..
6. While one person holds onto the tower, the second feeds the supply cables through the base plate and into the tower interior.

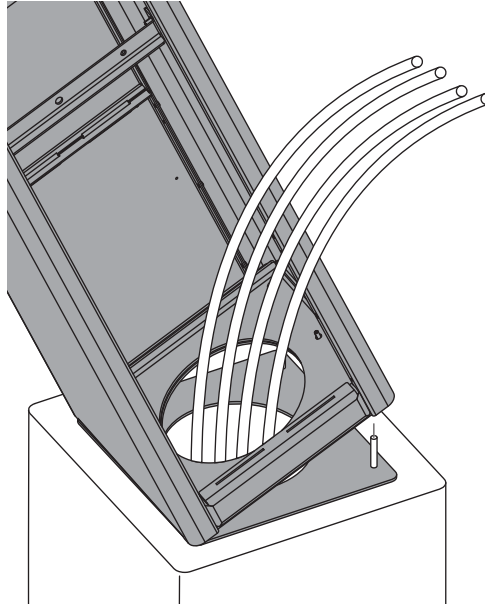


Fig. 5-6 Setting ticket terminal tower down on the foundation

7. Adjust the supply cable for electrical installation and shorten it, if required.
8. In the bottom plate of the tower, round and eccentric washers are integrated. Select suitable washers and break them out with a screwdriver.

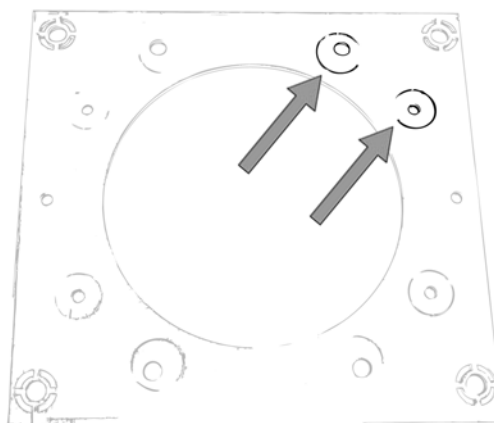


Fig. 5-7 Break out integrated washers



9. Place the tower on the foundation and use the supplied nuts and washers to fasten it to the base plate.
  - Check whether the tower is still loose. If there is still play, tighten the nuts.
  - The ticket terminal is ready for electrical connection.

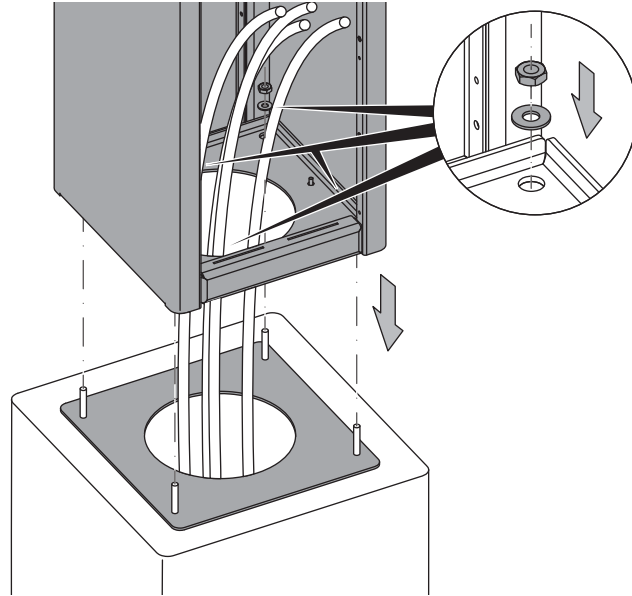


Fig. 5-8 Screwing together ticket terminal tower and foundation



**Note!**

The electrical connection must be performed by an electrically skilled person.



**Note!**

The electrical connection must be performed by an electrically skilled person.

**Requirements:**

- The supply line is de-energized.
- Main switch and residual current device are switched off.
- The tower is screwed to the foundation.
- The supply, data and network cables are laid and prepared in accordance with the specifications of Beckmann GmbH (see chapters 5.3.1, 5.3.2 and 5.3.3).
- The supply lines are fed into the tower and shortened appropriately.

1. Open the cover of the Connection Isobox Power supply (14) within the device by loosening the 4 x plastic screws.

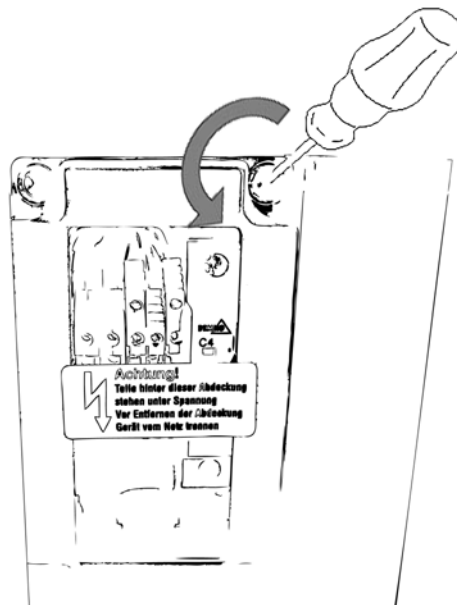


Fig. 5-9 Opening cover of Connection Isobox Power supply

2. Turn the main switch to OFF.

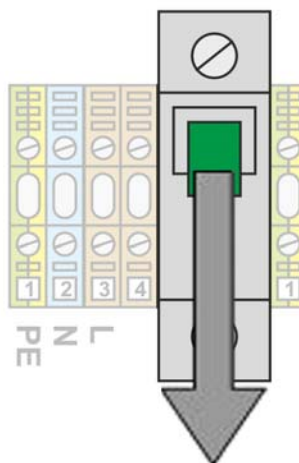


Fig. 5-10 Main switch OFF

- Use a suitable tool (such as a screwdriver) to pierce the splash guard grommet for the further cable entry at the bottom of the Isobox.

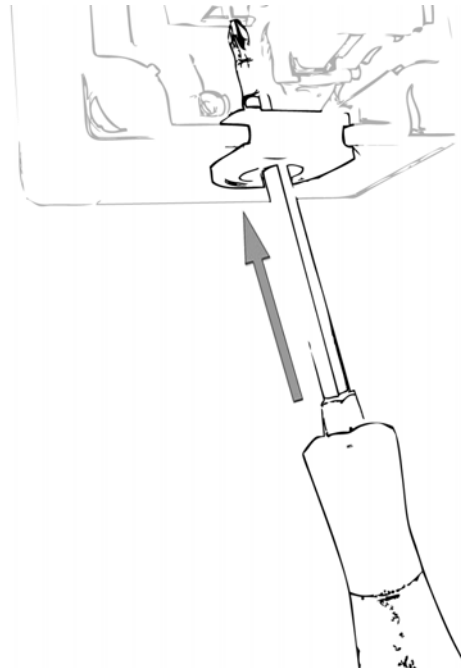


Fig. 5-11 Piercing the splash guard grommet



**Note**

Make sure that the opening in the splash guard grommet is not too large to ensure effective splash protection. The resulting IP degree of protection of the ticket terminal is significantly influenced by this.

- Insert the supply line from below through the splash guard grommet into the Isobox. When laying the supply line inside the ticket terminal, ensure a clean, collision-free cable routing. Use the existing cable guide clamps in the corners of the ticket terminal. Realize also a strain relief! Connect the 230V AC supply line to the terminals (1, 2, 3) in the Isobox (14) according to the following wiring diagram:

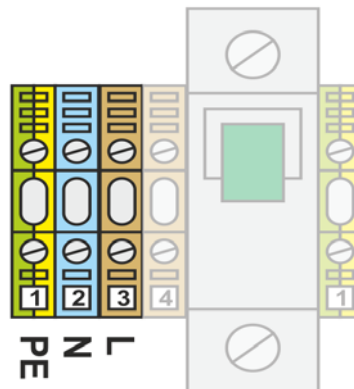


Fig. 5-12 Wiring diagram connection of power supply

5. Open the cover of the Connection Isobox Data I/O (18) within the device by loosening the 4 x plastic screws.

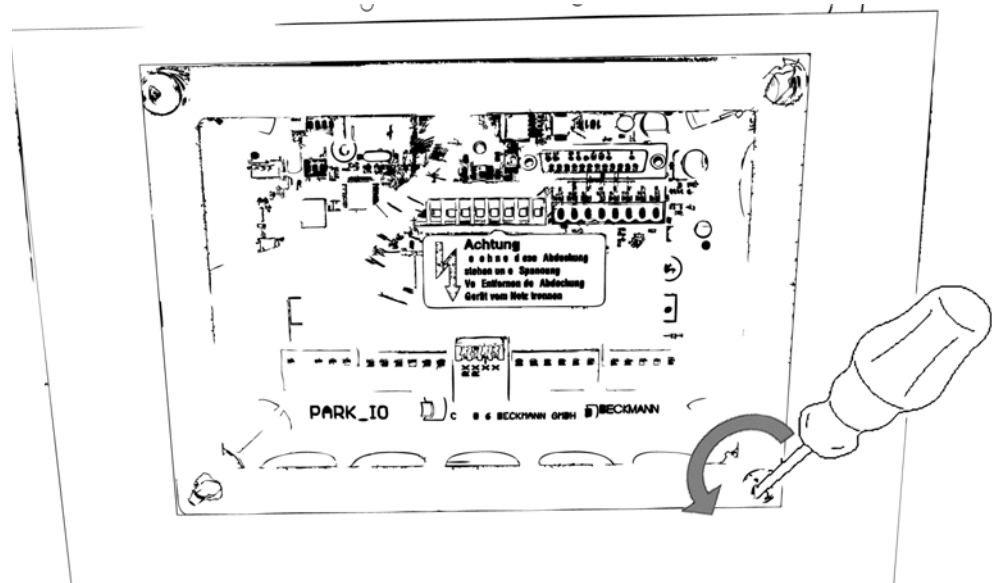


Fig. 5-13 Opening cover of Connection Isobox Data I/O

6. Use a suitable tool (such as a screwdriver) to pierce the splash guard grommet for the further cable entry at the bottom of the Isobox.

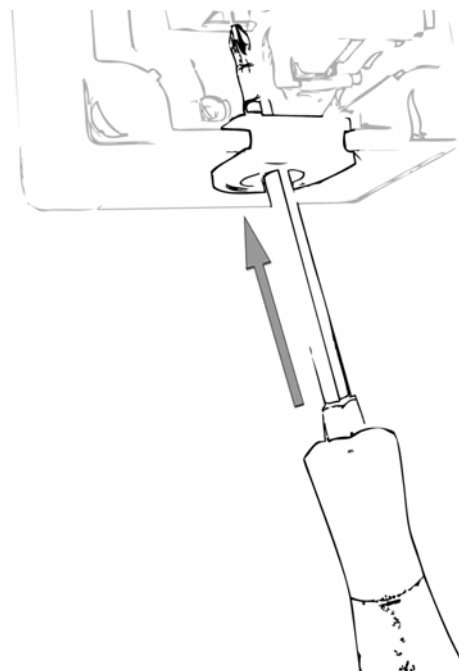


Fig. 5-14 Piercing the splash guard grommet



#### Note

Make sure that the opening in the splash guard grommet is not too large to ensure effective splash protection. The resulting IP degree of protection of the ticket terminal is significantly influenced by this.

- Insert the supply line from below through the splash guard grommet into the Isobox. When laying the supply line inside the ticket terminal, ensure a clean, collision-free cable routing. Use the existing cable guide clamps in the corners of the ticket terminal. Realize also a strain relief! Connect the data and signal lines to the terminals in the Isobox (18) according to the following wiring diagram:

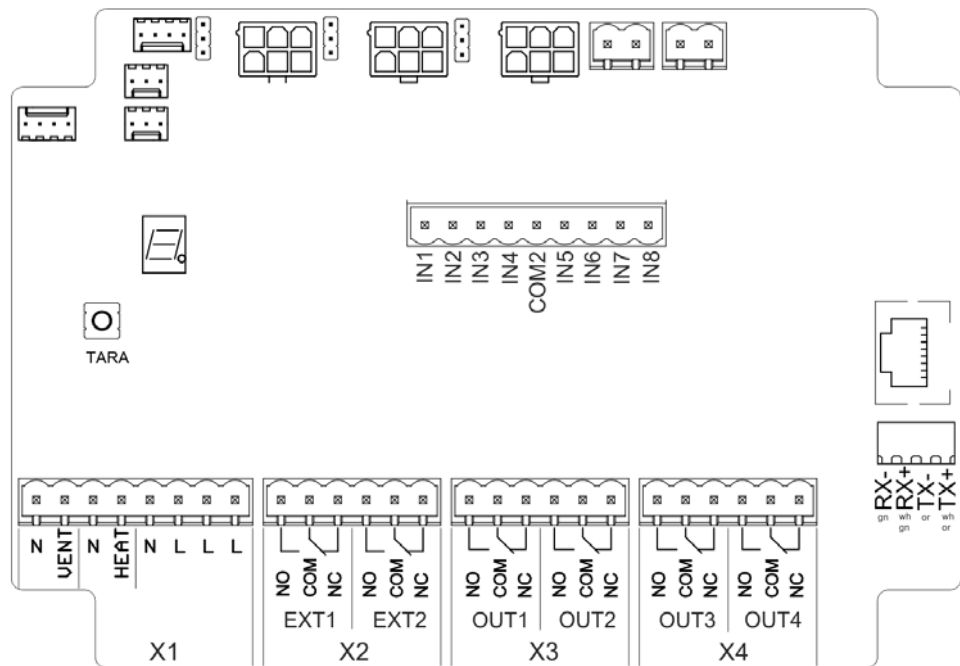


Fig. 5-15 Wiring diagram connection of data & signal lines I/O

- Connect the network cable to the terminals according to the following connection diagram. Note the color coding of the individual cables..

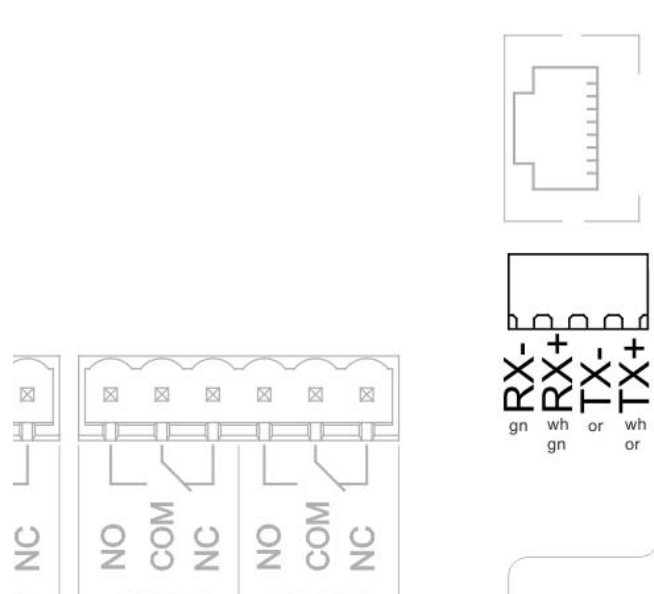


Fig. 5-16 Connection of network cable

5.4.1 Connection of barrier controllers on car parks and RV sites

5.4.1.1 Pin assignment of data line-OUT to the barrier controller

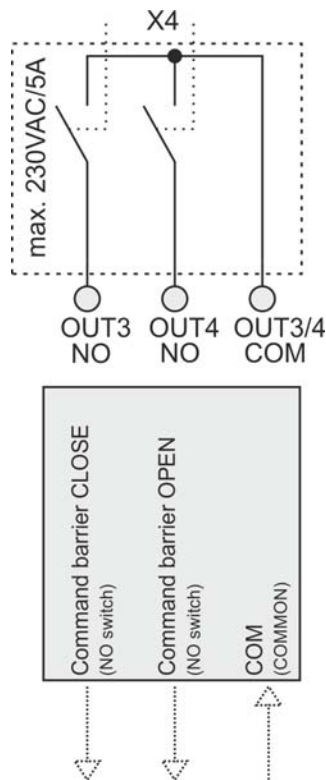


Fig. 5-17 Wiring diagram of data line-OUT to barrier controller

5.4.1.2 Pin assignment of data line-IN from the barrier controller

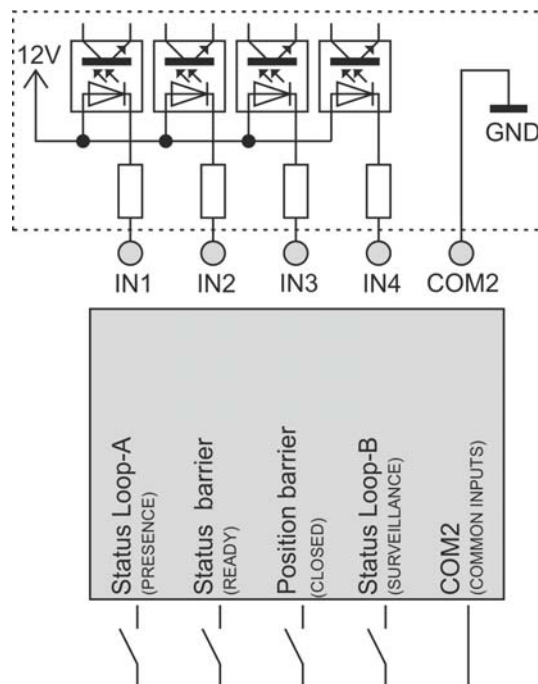


Fig. 5-18 Wiring diagram of data line-IN from barrier controller

5.4.1.3 Barrier specific configuration examples



**Note**

The following, exemplary pin assignments and configurations of the manufacturer-specific barrier controller are for illustrative purposes only and were created in 2014. For the topicality, completeness and accuracy Beckmann GmbH assumes no responsibility.

Always refer to the barrier manufacturer's current instructions / documentation and check or correct the pin assignment and configuration!

Terminal	Function	Connection <b>MAGNETIC MHTM Microdrive*</b>
IN1	Status Loop-A (Presence)	X3-No4
IN2	Status barrier	X3-No3
IN3	Position barrier	X3-No2
IN4	Status Loop-B (Surveillance)	X3-No5
COM2	Common potential inputs	X3-COM4-6
OUT3 NO	Command barrier CLOSE	X1-IN6
OUT3 COM	Common potential Out3	X2-24V_2
OUT4 NO	Command barrier OPEN	X1-IN1
OUT4 COM	Common potential Out4	X2-24V_2

Terminals X3-COM1-3 and X3-COM4-6 must be connected together.

Fig. 5-19 Exmpl.-configuration Magnetic MHTM Microdrive

Terminal	Function	Connection <b>ELKA MO64*</b>
IN1	Status Loop-A (Presence)	X1-15 up
IN2	Status barrier	X1-14 up
IN3	Position barrier	X1-13 up
IN4	Status Loop-B (Surveillance)	X1-12 up
COM2	Common potential inputs	X1-15 down
OUT3 NO	Command barrier CLOSE	X1-2 up
OUT3 COM	Common potential Out3	X1-4 down
OUT4 NO	Command barrier OPEN	X1-4 up
OUT4 COM	Common potential Out4	X1-4 down

Terminals X-15u, X1-14u, X1-13u and X1-12u must be connected together.

**Configuration ELKA MO64\***

- Loop A = Surveillance
- Loop B = Presence
- P630 = 4 (Modus: Presence, safety and closing two loops)
- P501 = 15 (Occupied A Static)
- P502 = 10 (End position CLOSED)
- P503 = 1 (Error inverted)
- P504 = 19 (Occupied B Static)

Fig. 5-20 Exmpl.-configuration ELKA MO64

Terminal	Function	Connection Automatic Systems AS1320*
IN1	Status Loop-A (Presence)	C-11
IN2	Status barrier	A-11
IN3	Position barrier	-
IN4	Status Loop-B (Surveillance)	B-11
COM2	Common potential inputs	A-12 B-12 C-12
OUT3 NO	Command barrier CLOSE	B-7
OUT3 COM	Common potential Out3	A-7
OUT4 NO	Command barrier OPEN	C-7
OUT4 COM	Common potential Out4	A-7

Fig. 5-21 Exmpl.-configuration Automatic Systems AS1320

Terminal	Function	Connection FEIG*
IN1	Status Loop-A (Presence)	X14-10 / K1NO
IN2	Status barrier	Bridge to 12 / COM2
IN3	Position barrier	-
IN4	Status Loop-B (Surveillance)	X14-20 / K2NO
COM2	Common potential inputs	X14-11 / K1Com X14-21 / K2Com
OUT3 NO	Command barrier CLOSE	X21-43 / close
OUT3 COM	Common potential Out3	X21-40 / +24V
OUT4 NO	Command barrier OPEN	X21-41 / open
OUT4 COM	Common potential Out4	X21-40 / +24V

Fig. 5-22 Exmpl.-configuration FEIG

5.4.1.4 Example special application 1: Park operation with only one barrier

Wenn die Ein- und Ausfahrt über eine gemeinsame Schranke realisiert werden soll, ist dies unter Verwendung von 3 x Bircher-ProLoop2 Zusatzmodulen möglich:

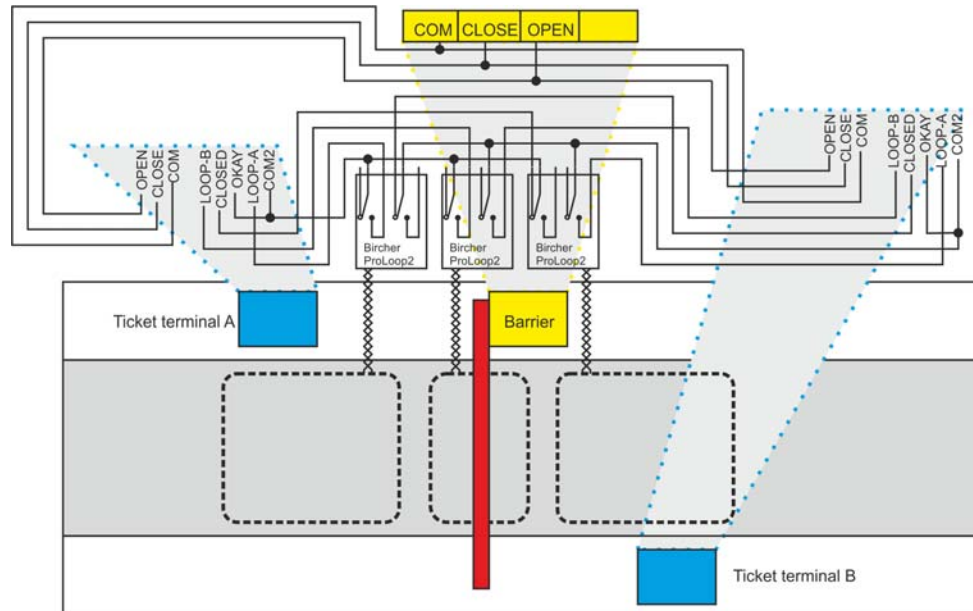


Fig. 5-23 1-barrier-operation

5.4.1.5 Example special application 2: Direct control of a signal light

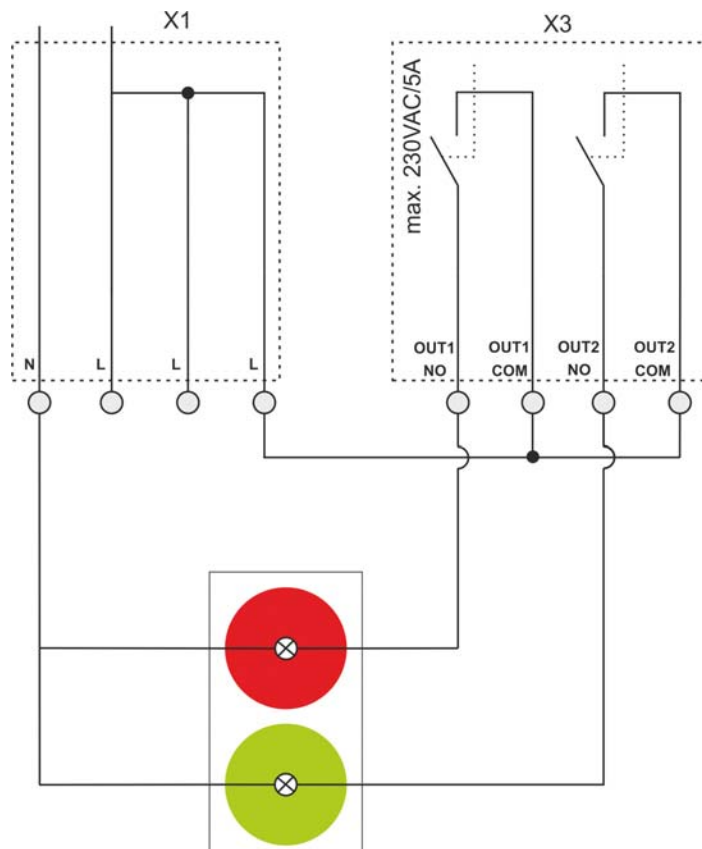


Fig. 5-24 Direct control of a signal light



5.4.2 Connection of turnstile controllers for access control

5.4.2.1 Pin assignment of data line-OUT to the turnstile controller

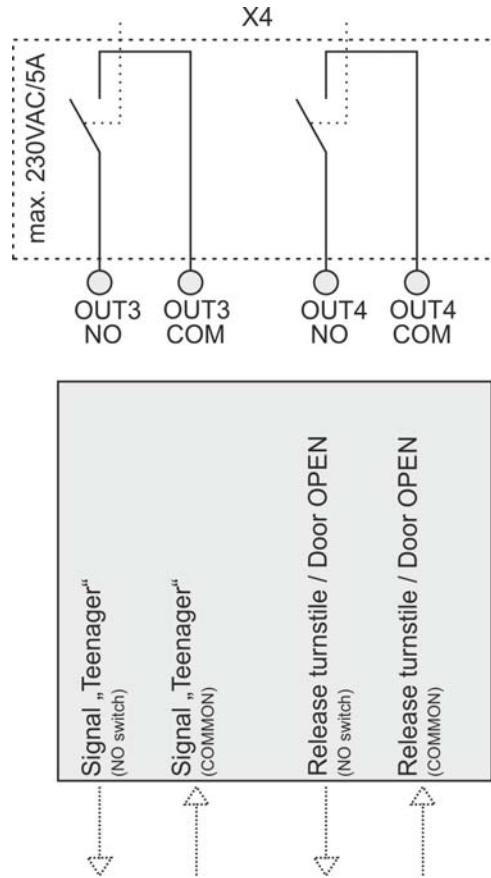


Fig. 5-25 Wiring diagram of data line-OUT to turnstile controller

5.4.2.2 Pin assignment of data line-IN from the turnstile controller

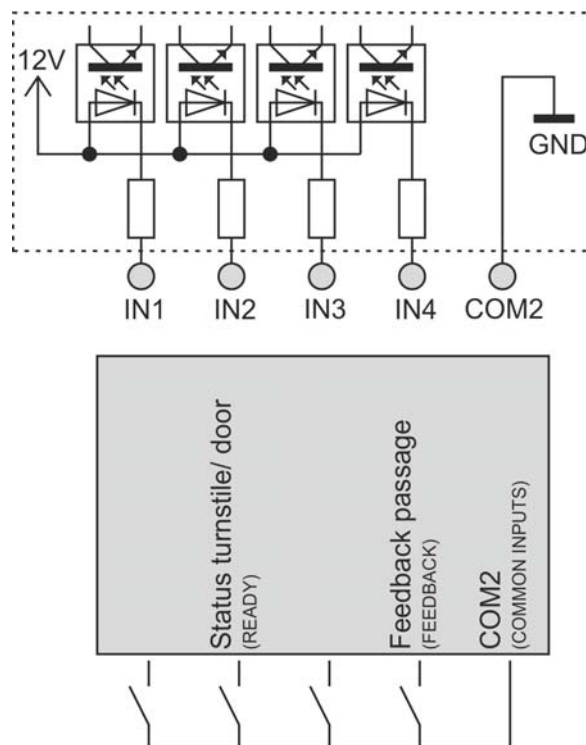


Abb. 5-26 Wiring diagram of data line-IN from turnstile controller

5.4.2.3 Turnstile specific configuration examples



**Note**

The following, exemplary pin assignments and configurations of the manufacturer-specific turnstile controller are for illustrative purposes only and were created in 2016. For the topicality, completeness and accuracy Beckmann GmbH assumes no responsibility.

Always refer to the turnstile manufacturer's current instructions / documentation and check or correct the pin assignment and configuration!

Terminal	Function	Connection Logiturn II*
IN4	Feedback passage	X02.3 - AMP1/on
COM2	Common potential inputs	X02.4 - AMP1/com
OUT3 NO	Signal light NO switch	
OUT3 COM	Signal light common	
OUT3 NC	Signal light NC switch	
OUT4 NO	Release turnstile NO switch	X03.7 - B
OUT4 COM	Release turnstile common	X03.5 - +24V
OUT4 NC	Release turnstile NC switch	

Fig. 5-27 Exempl.-configuration Gotschlich Logiturn II

9. Replace the covers of the isoboxes and screw them tight.
10. Replace the rear cover of the housing as follows - insert the lower part first and close the upper part until it clicks into place.
11. Use the key to lock it.
  - The installation of the ticket terminal is now completed.
  - Where applicable, the installation of connected peripherie has to be effected.
  - The ticket terminal is ready for start-up.



**Note!**

Before you mount external components (e.g. readers) on the front, you agree with Beckmann GmbH in advance. Sandwich rain deflectors are mounted on the inside of the housing of the ticket pillar and must not be drilled or damaged!



**Note!**

Before start-up of the ticket terminal it must be by inspected and approved by a qualified electrician according to BGV<sup>1</sup> A3 and DIN<sup>2</sup> VDE 0701-0702.

The initial and repeat examinations generally comprise the following test steps:

- inspection
- trial, function test and measurement

It must be checked with appropriate measuring devices. The measured values are to be documented in suitable inspection reports, e.g. a ZVEH<sup>3</sup> test report as per DIN VDE 0701-0702. Should the acceptance not be effected, safe operation of the ticket terminal cannot be guaranteed.

1. German Employers' Liability Insurance Association regulations  
 2. German Association for Electrical, Electronic & Information Technologies  
 3. Central Association of the German Electrical and Information Technology Trade

## 6 Start-up and operation

Before start-up read the safety chapter.

### 6.1 Start-up

Requirements:

- The ticket terminal is set up and installed in accordance with chapter 5.
- It has been inspected and approved by a qualified electrician.
- The on-site power is switched on (RCBO on).
- The components to be controlled (barrier controllers) are ready for operation.

1. Open the lock cover, insert the key and open the lock (180 ° key rotation) of the rear cover.

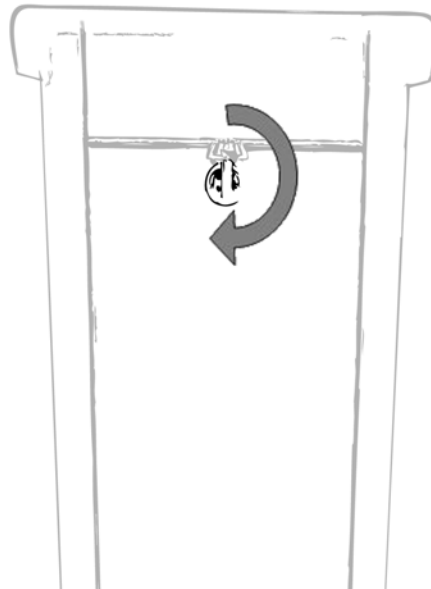


Fig. 6-1 Unlock of the rear cover

2. Pull the unlocked rear cover toward you first and then lift the cover out of the guide.

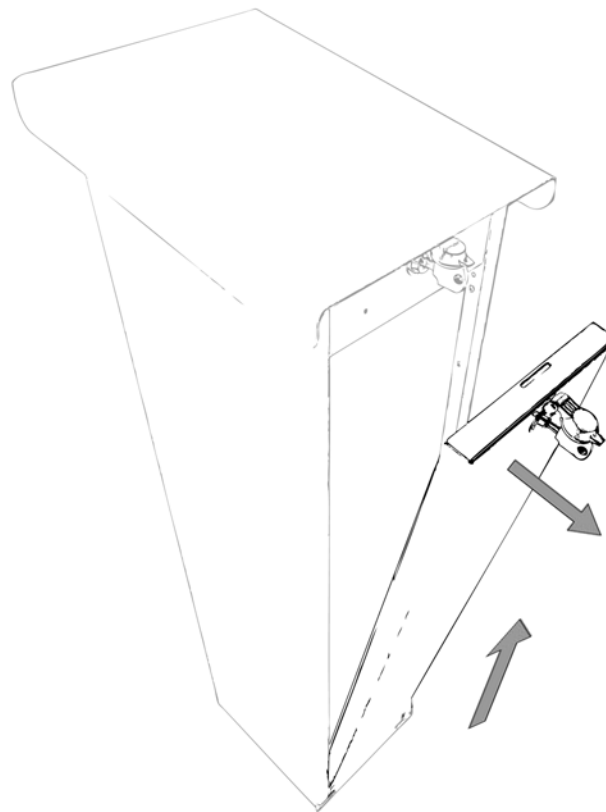


Fig. 6-2 Removing the rear cover

3. Open the cover of the Connection Isobox Power supply (14) within the device by loosening the 4 x plastic screws.

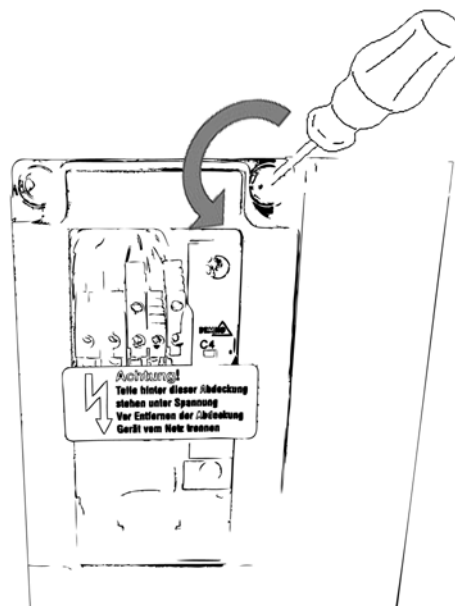


Fig. 6-3 Opening cover of Connection Isobox Power supply

4. Turn the main switch to ON
  - The controller starts.
  - The display turns on.
  - The LEDs are lit.

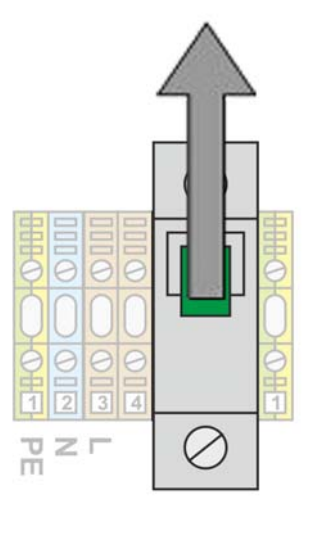


Fig. 6-4 Main switch ON

5. Replace the cover of the isobox and screw it tight.



**Note**

After switching on the main switch to ON, the boot process of the ticket terminal starts. The progress can be seen in the display (2) of the ticket terminal. Wait until the ticket terminal has fully started up and the display (2) indicates that it is ready for operation (entrance or exit).

**6.1.1 Exit terminal / outdoor access terminal - insertion of the collecting container**

6. Place the collecting container on the carrier plate, so that the collecting container is centered in the carrier guide.

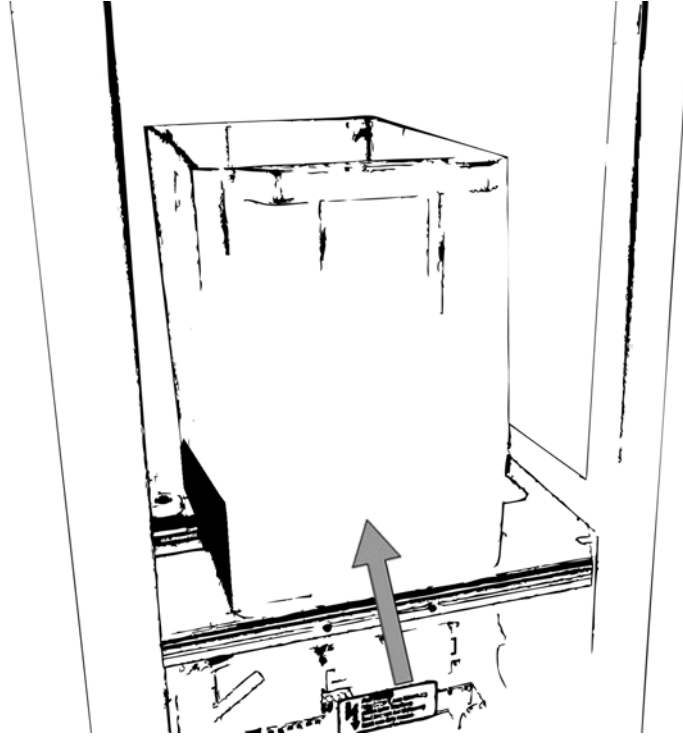


Fig. 6-5 Insertion of collecting container

### 6.1.2 Entrance terminal - insertion of the ticket-fanfold-cartridge

7. Completely remove the plastic film from the ticket-fanfold-cartridge, then remove the upper carton cover along the perforated edges.
  - If the optional weighing sensor is installed, reset the ticket filling quantity to 100%, see chapter Programming 7.1.
8. Place the ticket fanfold carton on the carrier plate so that the carton is centered in the carrier guide and that the beginning of the ticket can be fed from the back into the printer with the thermosensitive top side.

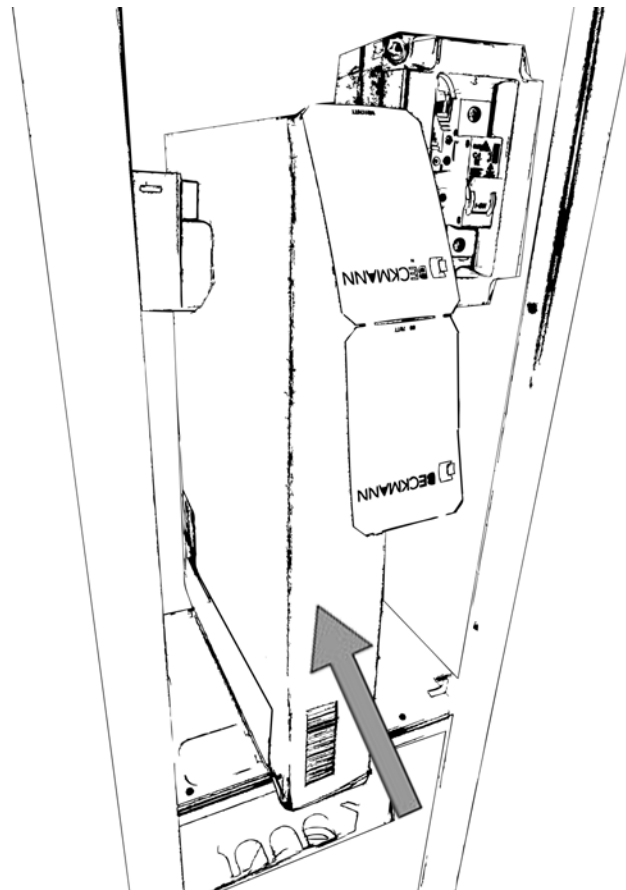


Fig. 6-6 insertion of the ticket-fanfold-cartridge



#### Attention

Only use the application-specific approved tickets of Beckmann GmbH or tickets that meet the specifications of Beckmann GmbH for the respective application! Otherwise, damage to the printer and impairment of the overall system function may occur.

Before inserting a ticket into the printer (feed), make sure that the blue printhead levers in the outer position located. When the lever is in the inner position, carefully pull the blue lever outward.

Before inserting a ticket into the printer (feed), make sure that the ticket terminal has fully booted! Otherwise ticket jam can occur!

9. Insert the first ticket from the back into the printer, so that the thermosensitive, unprinted side of the ticket is on top. On the bottom side of the ticket is the Beckmann logo.

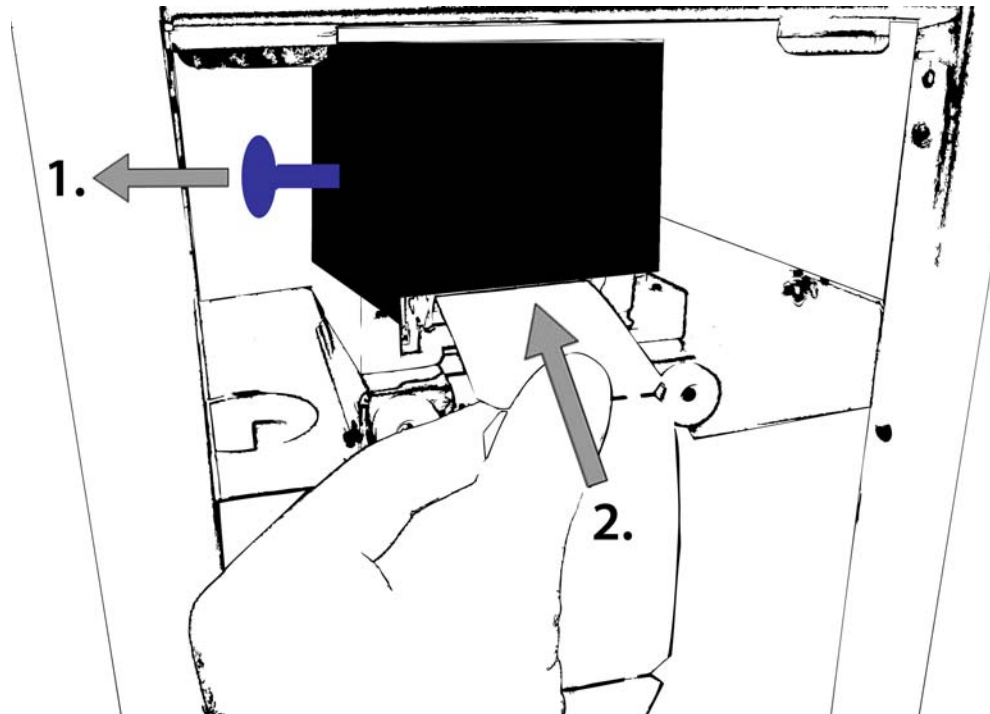


Fig. 6-7 Ticketfeed printer

10. The printer should now automatically feed the paper (Feed), cut and spend one ticket. The motorized reader should automatically transport this ticket to the exit slot (4) on the front of the ticket terminal.
  - If the optional weighing sensor is installed, reset the ticket filling quantity to 100%, see chapter Programming 7.1.
11. Replace the rear cover of the housing as follows - insert the lower part first and close the upper part until it clicks into place.
12. Use the key to lock it.
  - The ticket terminal is ready for operation.



#### Note

To ensure the correct operation of the ticket terminal, operate the ticket terminal only with the lid completely closed on top and the rear cover fully closed at the back. Otherwise it may cause interference by extraneous light in the photocells of the printer and the motorized reader.



## 6.2 Operation

### 6.2.1 Entrance terminal

#### 6.2.1.1 Request ticket

1. Drive a vehicle on the presence loop in front of the barrier.
2. Press the green illuminated ticket request button (3).
3. The ticket is printed and subsequently presented in the issue slot (4). After removing the ticket, the barrier boom opens, now drive completely through the opened barrier.
4. The ticket only becomes valid after a complete transit was absolved (the surveillance loop must be completely passed).

#### 6.2.1.2 Special opening by using authorized RFID card

1. Drive a vehicle on the presence loop in front of the barrier.
2. Insert your Beckmann RFID card into the entry slot (4) of the motorized reader.

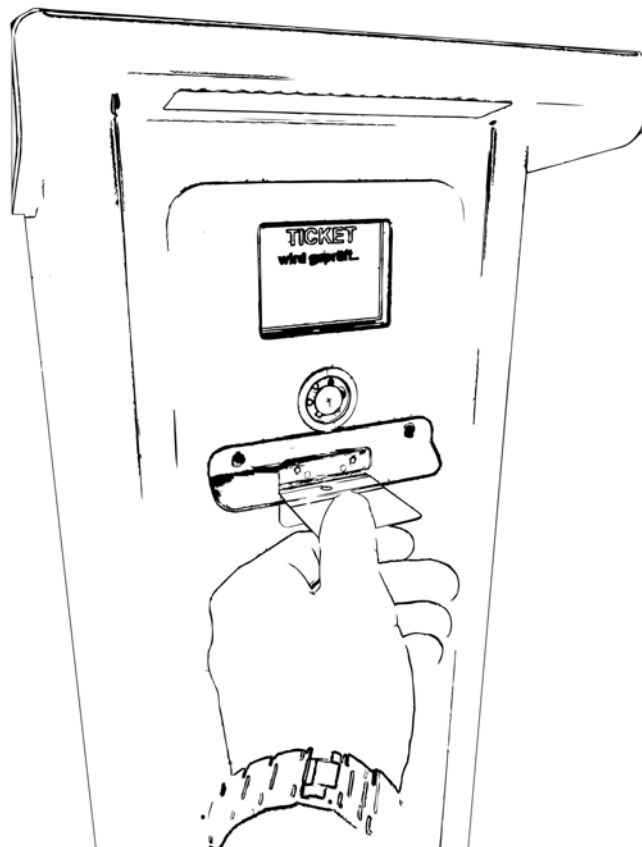


Fig. 6-8 Insertion of RFID-card

3. After the validity of the RFID card has been checked, it is transported back to the issue slot (4). After removing the card, the barrier boom opens, now drive completely through the opened barrier.

**6.2.1.3 Exchange of ticket-fanfold-cartridge**

1. If paper tickets have already been inserted in the printer and the cartridge has to be changed, then the printhead must be unlocked before the tickets can be removed. To do this, press the blue printhead position control lever (1) to the inner side of the printer. Now, the feed ticket should be easily pulled backwards out of the printer (2).
2. The ticket cartridge can then be removed to the rear.

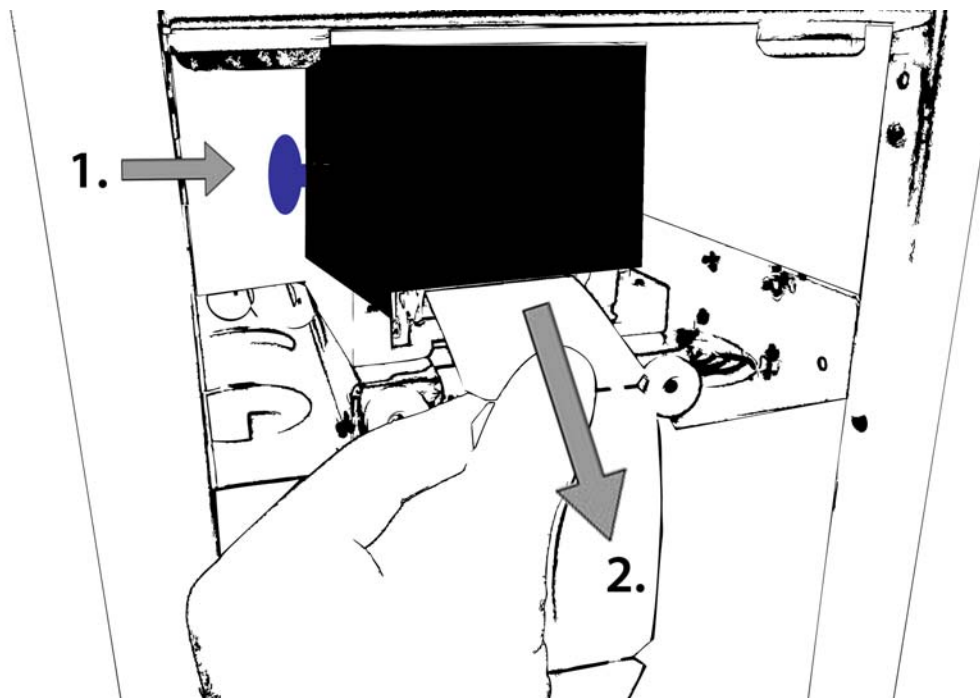


Fig. 6-9 Exchange of ticket-fanfold-cartridge

3. The insertion of a new ticket-fanfold-cartridge is documented in chapter 6.1.2, proceed as described there.

## 6.2.2 Exit terminal

### 6.2.2.1 Enter ticket

1. Drive a vehicle on the presence loop in front of the barrier.
2. Insert your Beckmann ticket into the entry slot (4) of the motorized reader.



#### Note

When entering a barcode ticket in the entry slot, make sure that the barcode label is at the top of the ticket. If the ticket is entered upside down or backwards, the barcode can not be read.

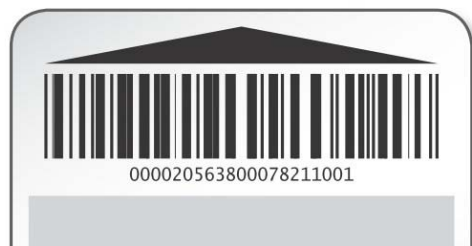


Fig. 6-10 Input direction of barcode ticket

3. After the validity of the ticket has been checked and there are no open costs, the barrier opens. Now drive completely through the opened barrier.
4. The ticket will be swallowed only after complete passage, i. the surveillance loop must be completely passed. If this does not happen or if the vehicle drive backwards, the ticket is transported back to the entry slot (4).
5. If there are still open costs or if the ticket is not valid, the ticket will be transported back to the entry slot (4). The respective rejection reason or the open costs are shown on the display (2) at the exit terminal.

### 6.2.2.2 Special opening by using authorized RFID card

1. Drive a vehicle on the presence loop in front of the barrier.
2. Insert your Beckmann RFID card into the entry slot (4) of the motorized reader.
3. After the validity of the RFID card has been checked, it is transported back to the issue slot (4). After removing the card, the barrier boom opens, now drive completely through the opened barrier.

**6.2.2.3 Cashless payment directly at exit terminal (optional)**

1. Open costs up to an amount of 25 € can be paid with EC and credit cards by plugging (chip) or by holding (NFC) the card to the optional micropayment terminal.

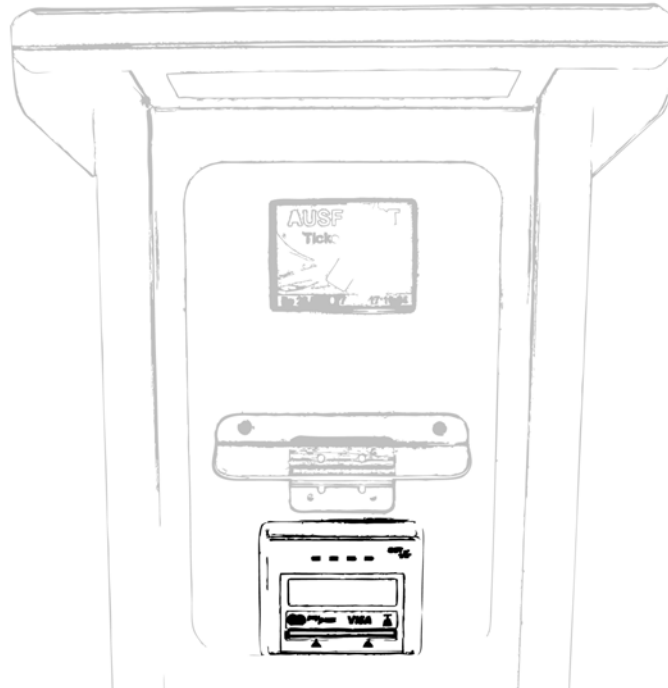


Fig. 6-11 Cashless micropayment at exit terminal

2. Follow the instructions on the display of the micropayment terminal.
3. After the full amount has been paid, the barrier opens. Now drive completely through the opened barrier.
4. The ticket will be swallowed only after complete passage, i. the monitoring loop must be completely passed. If this does not happen or if the vehicle returns, the ticket is transported back to the entry slot (4).

## 6.2.2.4 Coin payment terminal (optional)

1. Open costs can be paid directly at the exit by inserting coins into the coin terminal. The payment request is signaled by the flashing LED arrows around the coin slot.

**Note**

When paying with coins at the exit coin terminal, ensure that the payment process can not be aborted, i. Amounts paid can not be returned. Furthermore, if the overpayment is activated, no change money can be returned!

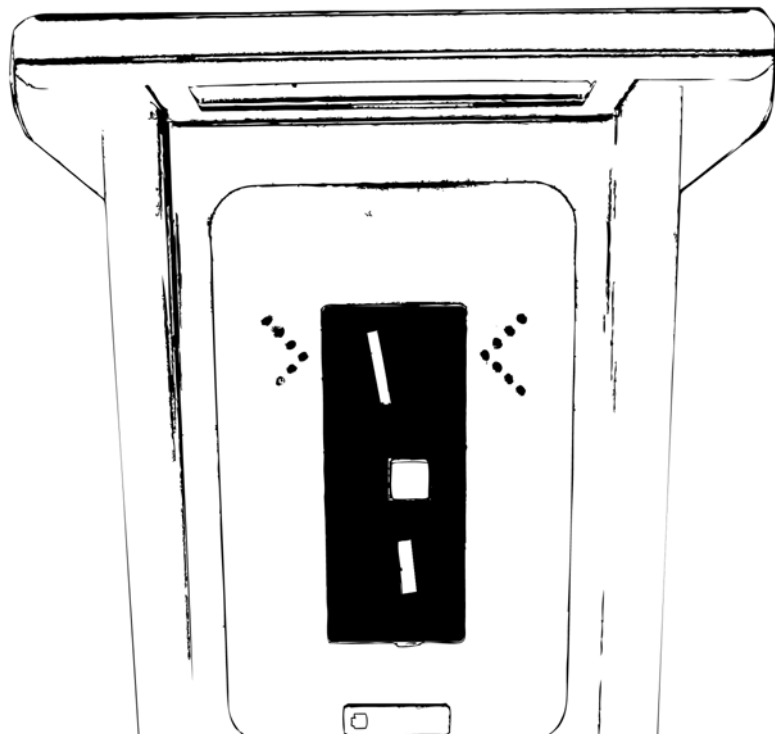


Fig. 6-12 Coin payment at the exit

2. After the full amount has been paid, the barrier opens. Now drive completely through the opened barrier.
3. The ticket will be swallowed only after complete passage, i. the monitoring loop must be completely passed. If this does not happen or if the vehicle returns, the ticket is transported back to the entry slot (4).

### 6.2.3 Outdoor access terminal

**Note**

When entering a barcode ticket in the entry slot, make sure that the barcode label is at the top of the ticket. If the ticket is entered upside down or backwards, the barcode can not be read.

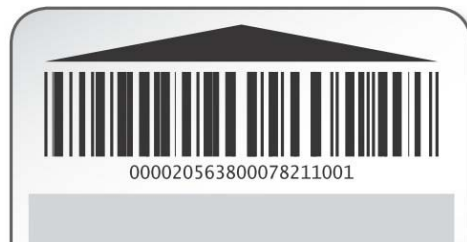


Fig. 6-13 Input direction of barcode ticket

#### 6.2.3.1 Enter ticket at entrance terminal

1. Insert your Beckmann ticket into the entry slot (4) of the motorized reader.
2. After the validity of the ticket has been checked, it is transported back to the issue slot (4). After removing the ticket, the turnstile can be passed. Walk completely through the released turnstile.
3. Only after passing completely the turnstile, the ticket will be stored in the database as entered.

#### 6.2.3.2 Enter ticket at exit terminal

1. Insert your Beckmann ticket into the entry slot (4) of the motorized reader.
2. After the validity of the ticket has been checked and there are no open costs, the turnstile can be passed. Walk completely through the released turnstile.
3. Only after passing completely the turnstile, the ticket will be swallowed. If there is no passage detected, the ticket will be transported back to the entry slot (4) after a defined period of time.
4. If there are still open costs or if the ticket is not valid, the ticket will be transported back to the entry slot (4). The respective rejection reason or the open costs are shown on the display (2) at the exit terminal.

#### 6.2.3.3 Special opening by using authorized RFID card

1. Insert your Beckmann RFID card into the entry slot (4) of the motorized reader.
2. After the validity of the RFID card has been checked, it is transported back to the issue slot (4). After removing the card, the turnstile can be passed. Walk completely through the released turnstile.

### 6.3 Shutdown

1. Open the lock cover, insert the key and open the lock (180 ° key rotation) of the rear cover.

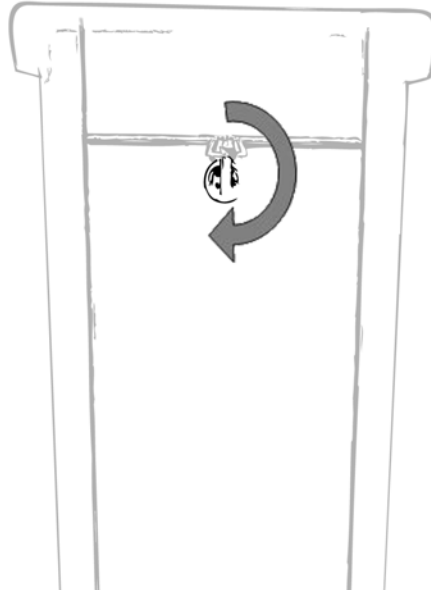


Fig. 6-14 Unlock of the rear cover

2. Pull the unlocked rear cover toward you first and then lift the cover out of the guide.

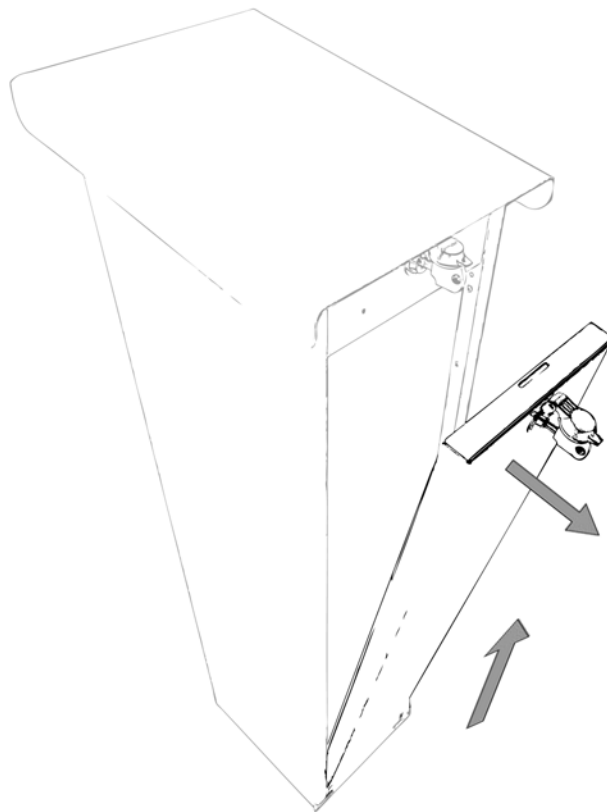


Fig. 6-15 Removing the rear cover

3. Open the cover of the Connection Isobox Power supply (14) within the device by loosening the 4 x plastic screws.

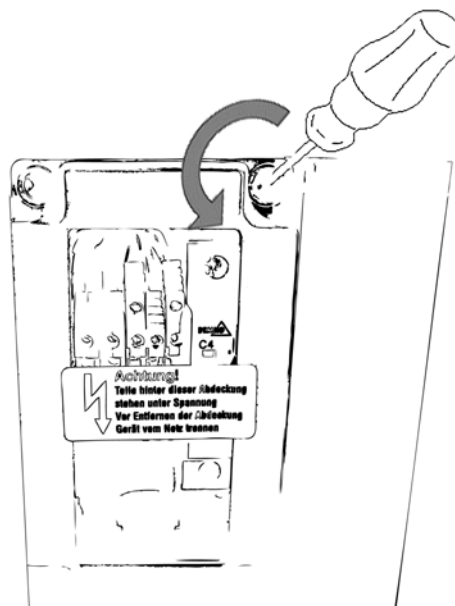


Fig. 6-16 Opening cover of Connection Isobox Power supply



4. Turn the main switch to OFF

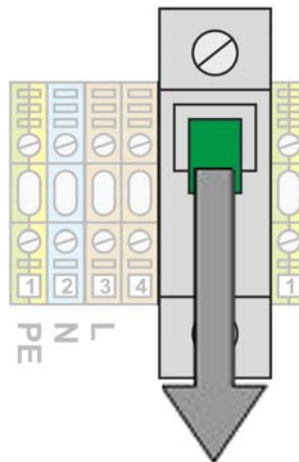


Fig. 6-17 Main switch OFF

5. Replace the cover of the isobox and screw it tight.
6. Remove all paper media (ticket-fanfold-cartridge), refer to chapter 6.2.1.3.
7. Store optional consumables / paper tickets separately at constant room temperature (+23 to -5 °C) and a relative humidity of 50% to -10%. Avoid exposure to direct UV and sunlight, contact with harsh chemicals and in aggressive atmospheres.
8. Replace the rear cover of the housing as follows - insert the lower part first and close the upper part until it clicks into place.
9. Use the key to lock it.
  - The ticket terminal is rendered inoperative.



## 7 Programming

The tariff and time settings as well as the essential configuration of the ticket terminal are made via the web interface.

Programming is either preset by Beckmann GmbH or can be carried out by the specialist dealer.

### 7.1 Programming with RFID master card

By entering the RFID master card in the input slot (4), information about temperature settings and database information can be called up directly at the ticket terminal.

1. Insert your Beckmann RFID master card into the entry slot (4) of the motorized reader.

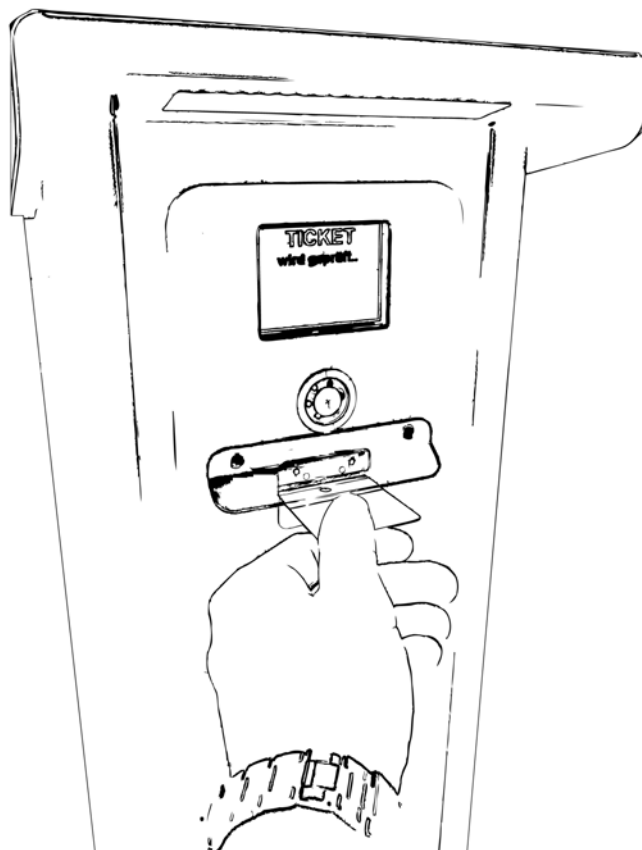


Fig. 7-1 Enter RFID master card

2. After the validity of the RFID card has been checked, it is transported back to the issue slot (4). Remove the card immediately.

3. Parallel to this, general information are shown (2) in the upper part. If the optional weighing sensor is installed in the ticket column, the further options exist:
  - Set new ticket-fanfold-cartridge to full (carton set 100%)
  - Balancing the weighing unit (TARA)
  - Exit the the master menu (>> END <<):

Printer-temperature:	+24.0 °C
Bottom-temperature:	+16.0 °C
Humidity:	30.0 %
Weight of cartridge:	0.20 kg
Heating1 switching threshold: On: <	+8.0°C
Off: >	+10.0°C
Free parking places normal:	6000
Free parking places reserved:	300
<b>Set cartridge 100%</b>	
<b>TARA</b>	
<b>&gt;&gt;END&lt;&lt;</b>	

Fig. 7-2 Displayscreen master menu

4. You can switch between the three menu options by briefly pressing the ticket request button (3). To execute a selected menu option, the ticket request button (3) is pressed for a long time.
5. The master menu can be left by selecting and executing the menu option >> END << as described above.

## 8 Maintenance

Anyone charged with maintenance tasks must have read and understood this operating manual, especially the safety chapter.

For information on which maintenance tasks are required please see chapter 8.2.

If questions arise please contact your specialist dealer or Beckmann GmbH.

For work at the electrical installation consult an electrically skilled person.

### 8.1 Safety

Take the ticket terminal out of operation before starting any maintenance task, see chapter 6.3.

**Danger!**

Risk of death due to electrical voltage!

The ticket terminal must be de-energized before undertaking any work. Shut down the ticket terminal according to chapter 6.3. Work must be performed by a qualified electrician.

**Warning!**

Danger of minor injuries due to sharp edges or falling objects!

Wear your personal protective equipment.

**Caution!**

Property damage owing to the use of wrong cleaning agents

Only use the cleaning agents specified in the maintenance chapter to clean the ticket terminal!

Never use a high-pressure cleaner to clean the ticket terminal!

## 8.2 Maintenance schedule

Tab. 8-1 Maintenance intervals

Component	Maintenance activity	Maintenance interval				Further information
		daily	weekly	monthl y	annually	
housing	visual inspection for damage	X				
	cleaning	in case of heavy contamination, e.g. when the display is no longer legible				Do not use a high-pressure cleaner. Do not use any aggressive cleaning agents. Use cleaning agents especially suited for stainless steel.
printer	not necessary					
in-/ output media slot	visual inspection for damage or particles	X				If you detect a foreign object or particles, switch off the ticket terminal immediately!
motorized reader	cleaning			X		
barcode scanner & mirror	cleaning			X		
heating & fan	inspection			X	X	

## 8.3 Maintenance activities

### 8.3.1 Cleaning the housing

Clean the housing by means of a damp, soft, lint-free cloth. Ensure that no moisture can enter. Do not use any solvents, alcohol-based cleaning agents or abrasive cleaners. Only use clear water and, if required, a cleaning agent suitable for stainless steel. Please note the further care instructions for stainless steel in the appendix.

### 8.3.2 Printer

The printer eXtendo X56 is maintenance-free and do not require regular service or maintenance.

### 8.3.3 In- / output media slot

If the input / output media slot is blocked or jammed, switch the ticket terminal off. Proceed as described in chapter faults.

### 8.3.4 Motorized reader

The motorized reader should be cleaned cyclically with dry compressed air. See chapter faults on how to remove the unit from the terminal. If the friction of the drive rollers is no longer sufficient due to wear and tear (the ticket is not transported and positioned safely), the reader must be returned to the dealer for repair.

**8.3.5 Barcode scanner**

Carefully clean the lens of the bar code scanner and the deflector mirror cyclically with a lint-free cloth and a mild non-aggressive cleaner, such as water. Water with little detergent. Allow the surfaces to dry completely / vent and check the result. If necessary, repeat the cleaning process until no soiling or streaks appear. How to remove the reader carriage from the column is described in the chapter faults.

**8.3.6 Heating and fan**

Check regularly if foreign objects (such as ticket sections or similar) have accumulated on the heater or fan. Remove all foreign objects immediately.





## 9 Faults

Anyone charged with the task of troubleshooting must have read and understood this operating manual, especially the safety chapter.

Rectify faults immediately to prevent further damage.  
Information on how to identify and clear the fault is provided in the fault table on chapter 9.2 as well as in the supplied external operating manuals.

If questions arise please contact your specialist dealer or Beckmann GmbH.

In case of faults at the electrical system, consult an electrically skilled person.

### 9.1 Safety

Take the ticket terminal out of operation before performing troubleshooting, see chapter 6.3.

**Danger!**

Risk of death due to electrical voltage!

The ticket terminal must be de-energized before undertaking any work. Shut down the ticket terminal according to chapter 6.3. Work must be performed by a qualified electrician.

**Warning!**

Danger of minor injuries due to sharp edges or falling objects!

Wear your personal protective equipment.

**Caution!**

Property damage owing to the use of wrong cleaning agents

Only use the cleaning agents specified in the maintenance chapter to clean the ticket terminal!

Never use a high-pressure cleaner to clean the ticket terminal!

9.1.1 Status diagnostics printer LEDs

The printer has 2 LEDs, the upper one is red, the lower one is green. The LEDs flash at different speeds:

- Slow: 0.5 Hertz (LED is “on” for one second and “off” for one second)
- Medium: 5 Hz (“on” for 100 ms and “off” for 100 ms)
- Fast (Flicker, or “F”): 10 Hz (“on” for 50 ms and “off” for 50 ms)

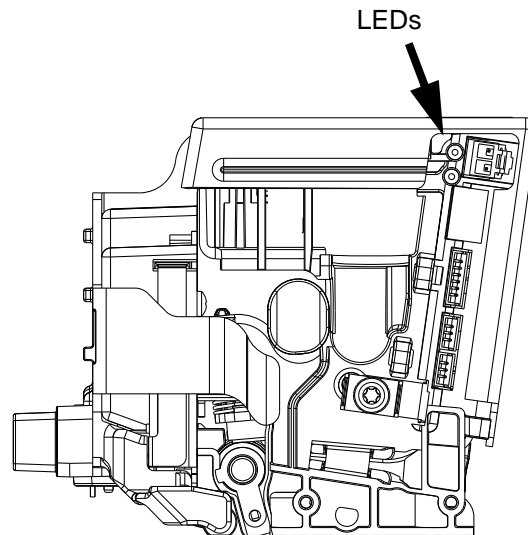


Fig. 9-1 Position printer LEDs

Tab. 9-1 Status diagnostics printer LEDs

Green LED	Red LED	Trouble shooting
Slow	Off	Normal operation.
Medium	Off	Out of paper.
Flicker	On	Data upload in progress (fonts, images, firmware, not normal data communication)
F0F	On	Printhead raised, printer stalled or over voltage. (Green LED will flicker, then go off for one second, then flicker and repeat.)
F1F	On	Paper error. (Green LED will flicker, then go off for one second, on for one second, off for one second, then flicker again and repeat.)
F2F	On	Cutter error. (Same pattern as above, but off, on, off, on, off.)
Off	On	Boot failure.
Flicker	Flicker	Initialization error.
On	On	System “hung” during initialization.

If the LEDs are not illuminated, the following reasons exist:

Tab. 9-2 Ursachen für nicht leuchtende LEDs

Possible reason	Trouble shooting
Power not connected	Check power supply, correct fit of the cable
Internal fuse defective	Removal and return of the printer for repair, exchange on site not possible

## 9.2 Fault table

The following tables lists a number of faults which can occur during operation and may be rectified by yourself.

If you are not able to clear the fault, immediately notify your specialist dealer or Beckmann GmbH.

Tab. 9-3 General faults

Fault	Reason	Trouble shooting
Display is black	No power supplied	Check power supply and RCBO. Contact qualified electrician.
No ticket dispensed	The request button is not green because there is no vehicle on the presence loop.	Drive with your vehicle on the presence loop.
	The request button is not green because there is no paper ticket in the printer.	Refill ticket-fanfold-cartridge and feed into printer, see chapter 6.1
	The request button is not green because there is a paper jam in the printer or motorized reader.	Clear the paper jam, see the following details.
	The request button is not green because there are no free parking places left.	Wait until a parking place is free/ available and then request a ticket again with the button.
	The request button is green, but was not pressed.	Press the green button to request a ticket.
	Ticket is not completely transported to output slot.	Clean motorized reader and photocells, see the following details.
Ticket is dispensed, but barrier does not open	Ticket was not taken out of output slot.	First remove the ticket completely, then drive through the opened barrier.
Ticket is not taken into motorized reader,	There is no vehicle on the presence loop.	Drive with your vehicle on the presence loop.
Ticket is taken into motorized reader, but can not be read	Ticket entered the wrong way / with false barcode position.	Turn the ticket over so the bar code is at the top front.
	Ticket is not completely printed, barcode printing is weak / incomplete.	Check if you use the approved Beckmann ticket type. If so, check that the printhead position control lever is in the outer position, see chapter 6.1.2.
	Barcode reader or mirror are dirty.	Clean barcode reader and mirror, see the following details.
	Barcode reader or mirror are dewy.	Check if the heating and the fan are switched on.
	Ticket is not positioned correctly under the barcode reader.	Clean motorized reader and photocells, see the following details.
Ticket is taken into motorized reader and read, but barrier does not open.	Ticket was not paid / discounted. Costs are open.	Pay open costs at the cash system or the payment terminal.

Tab. 9-4 Specific printer faults

No ticket is feed into printer.	Ticket-cartridge is empty/ tickets are missing.	Refill ticket-cartridge and feed ticket into printer.
	The blue printhead position control lever is in the inner position.	Pull out the blue printhead position control lever to the outer position, see chapter 6.1.2.
	Paper jam in printer.	Clear the paper jam, see the following details.
Only white/ blank tickets are printed.	Paper is feed the wrong way (upside down).	Remove tickets, insert the first ticket from the back into the printer, so that the thermosensitive, unprinted side of the ticket is on top. On the bottom side of the ticket is the Beckmann logo.
Quality of printed image is bad.	The blue printhead position control lever is not pulled out completely to the outer position.	Pull out the blue printhead position control lever completely to the outer position, see chapter 6.1.2.
	The printer/ printhead is dirty.	Clean the printer/ printhead, see the following details.
Printed image is not centered on the ticket	Edge distance in the printer settings	Adjust the edge distance in the printer settings.
	Mechanical paper guidance.	Correct the position of the mechanical limiters left & right on the ticket feeder, see the following details.

9.2.1 Preliminary work for troubleshooting the components

- Disconnect the power supply from the mains connection
- Disconnect the power supply of all connected devices (barriers or turnstiles)
- Shutdown the ticket terminal before troubleshooting, see chapter 6.3.



**Note!**

When it rains, cover the top section of the tower to prevent water from entering the housing.

1. Open the lock cover, insert the key and open the lock (180 ° key rotation) of the lid.

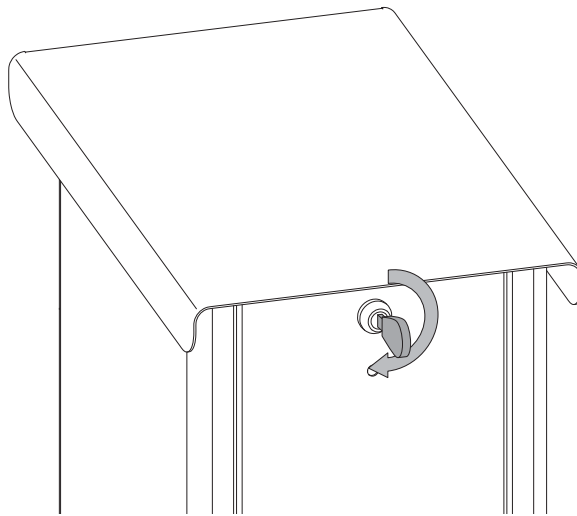


Fig. 9-2 Unlock the lid

2. First remove the lid of the ticket terminal, then the roof insulation.

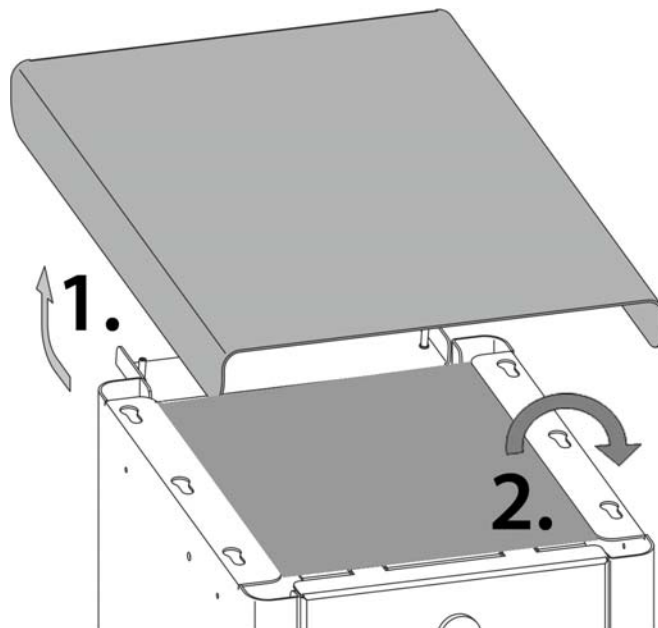


Fig. 9-3 Remove the lid and insulation

3. Open the lock cover, insert the key and open the lock (180 ° key rotation) of the rear cover.

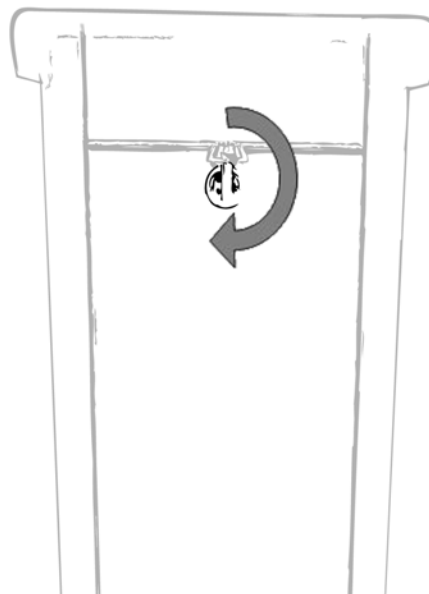


Fig. 9-4 Unlock of the rear cover

4. Pull the unlocked rear cover toward you first and then lift the cover out of the guide.

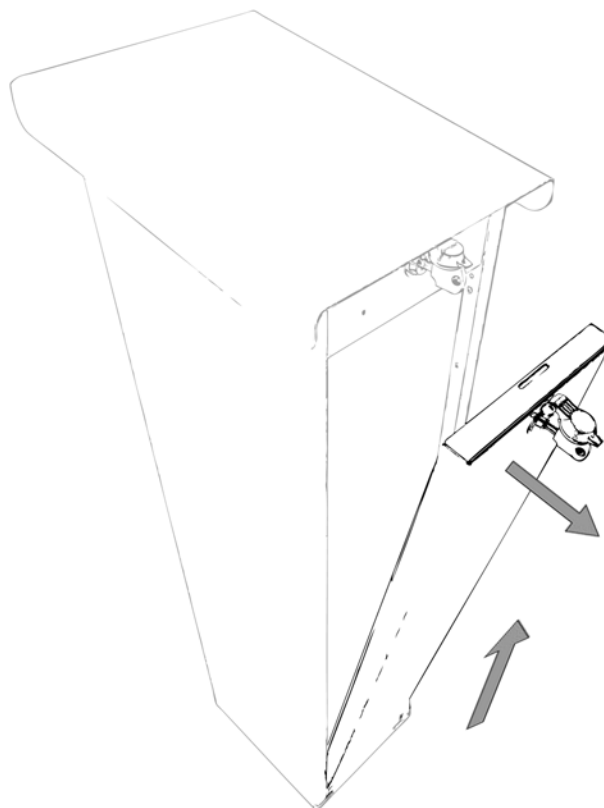


Fig. 9-5 Removing the rear cover

5. Pull the D-sub connector on the control unit backwards.



**Attention!**

Damage by removing under voltage!

Never pull this connector under voltage, as otherwise connected components can be destroyed!

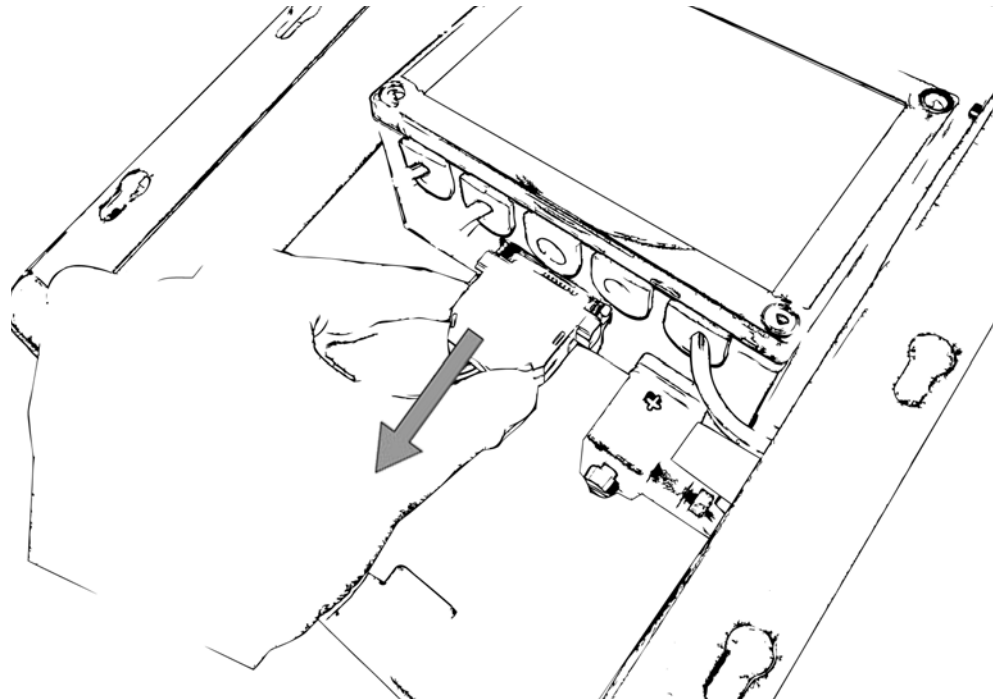


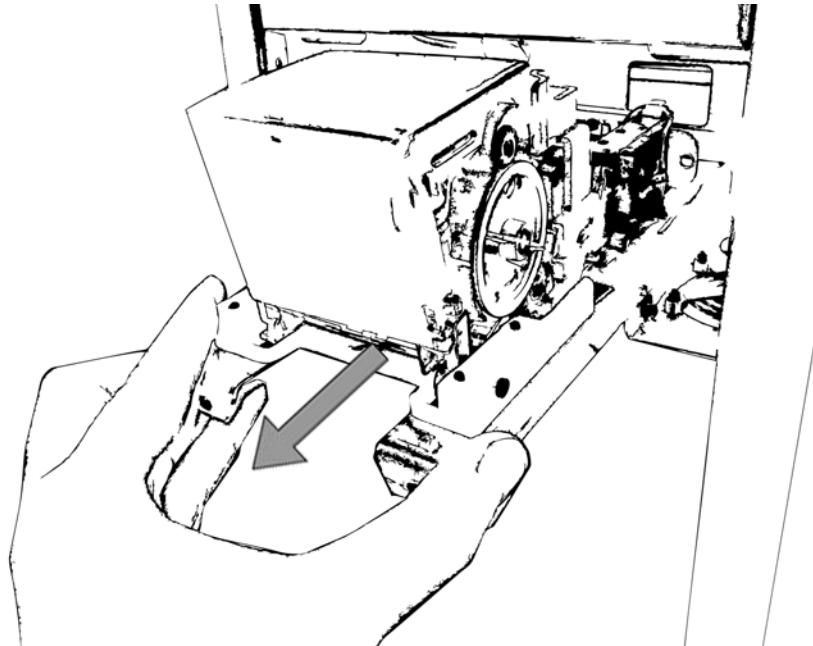
Fig. 9-6 Pull the D-sub connector

6. Unscrew the two plastic thumbscrews of the reader carriage from the back in a counterclockwise direction.



Fig. 9-7 Unscrew thumbscrews of reader carriage

7. Carefully pull the reader carriage backwards and remove it out of the ticket terminal. Make sure that the cables do not get caught or damaged.



*Fig. 9-8 Remove reader carriage backwards out of ticket terminal*

- Now, the following troubleshooting steps can be performed on the reader carriage components.



### 9.2.2 Clearing of ticket jam at motorized reader

- Jammed tickets in the motorized reader can be removed by turning the middle metal pinion clockwise.

**Danger!**

Risk of injury due to retraction / clamping / crushing!  
Never handle the motor reader when it is powered!

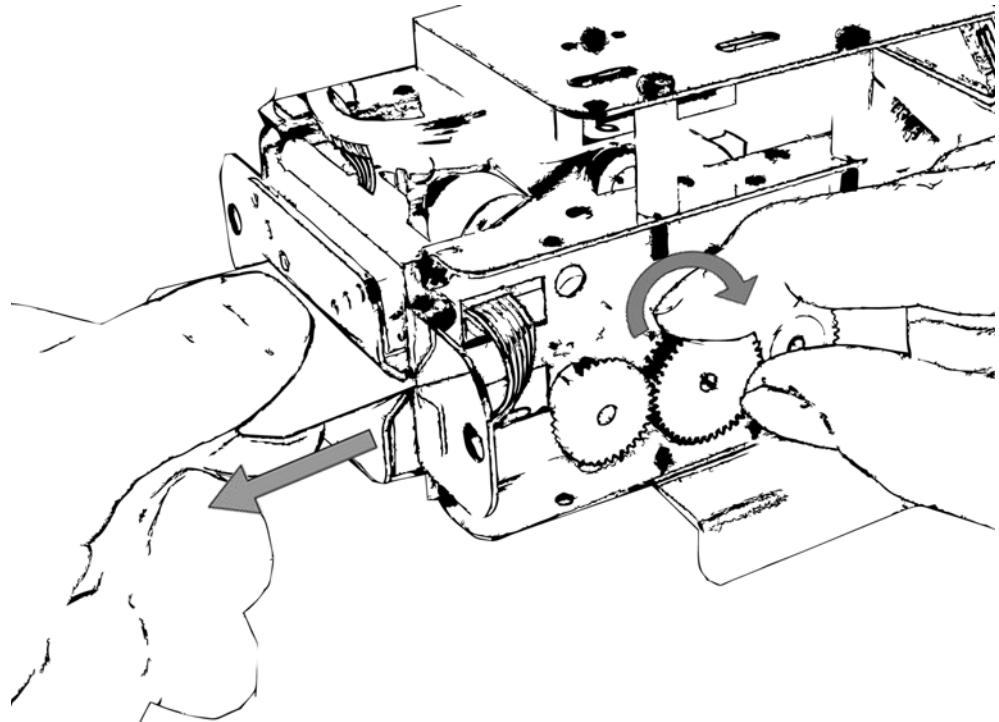


Fig. 9-9 Clearing of ticket jam at motorized reader

### 9.2.3 Cleaning of motorized reader

- Clean the motor reader, its drive pinion and light barriers with dry compressed air (blowing out).
- If, despite cleaning, the ticket can not be properly transported (drive rollers slip), return the motor reader for repair via your dealer.

9.2.4 Cleaning of barcode scanner (only for car exit terminal & outdoor access terminal)

- Carefully clean the lens of the bar code scanner and the deflector mirror with a lint-free cloth and a mild non-aggressive cleaner, such as water with little detergent. Allow the surfaces to dry completely / vent and check the result. If necessary, repeat the cleaning process until no soiling or streaks appear..

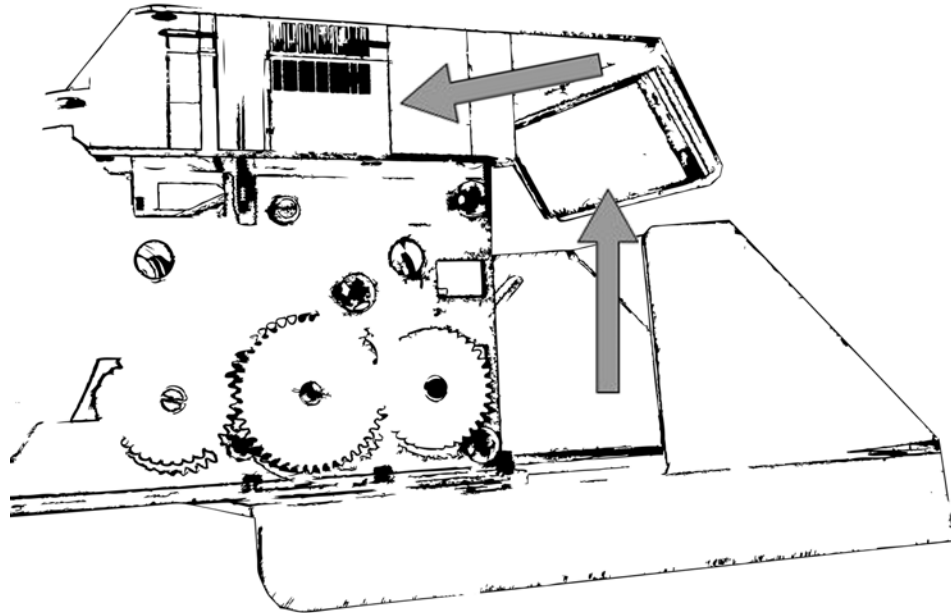


Fig. 9-10 Cleaning barcode scanner

9.2.5 Clearing of ticket jam at handover interface

- Fold up the printer unit and remove jammed tickets. Remaining sections in the printer can be easily removed by turning the blue handwheel

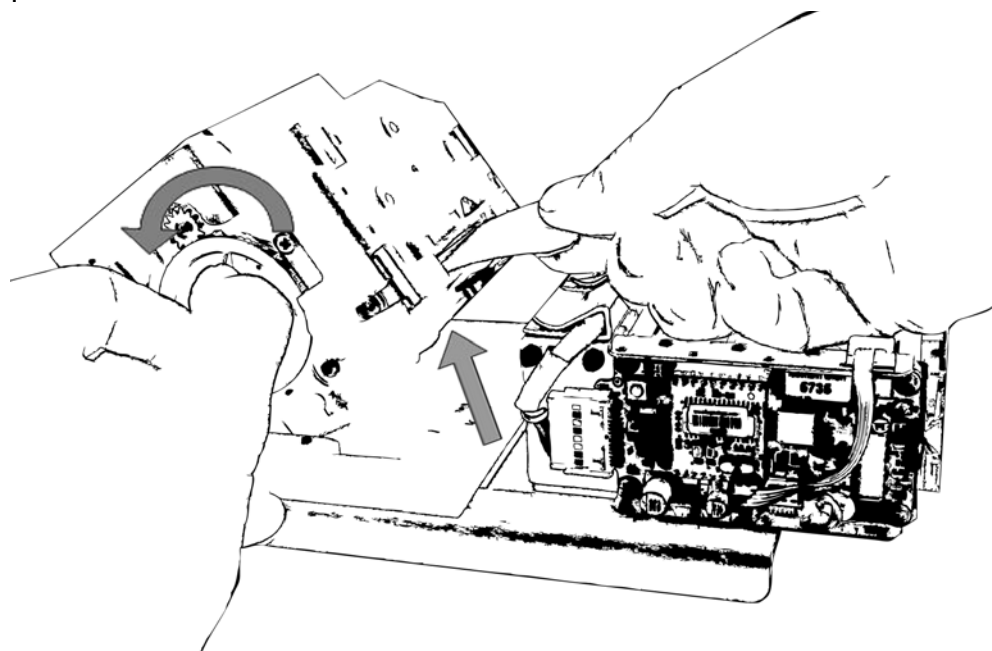


Fig. 9-11 Clearing of ticket jam at handover interface

9.2.6 Paper guidance of printer

If the print position is not centered on the paper, check the mechanical paper guide. The limiters must rest directly on the paper on each side to prevent the printed image from wandering.

With the paper in place, press both limiters slightly towards the paper so that they are directly against the paper



**Attention!**

Should the ticket buckle, the distance between the limiters must be enlarged slightly!

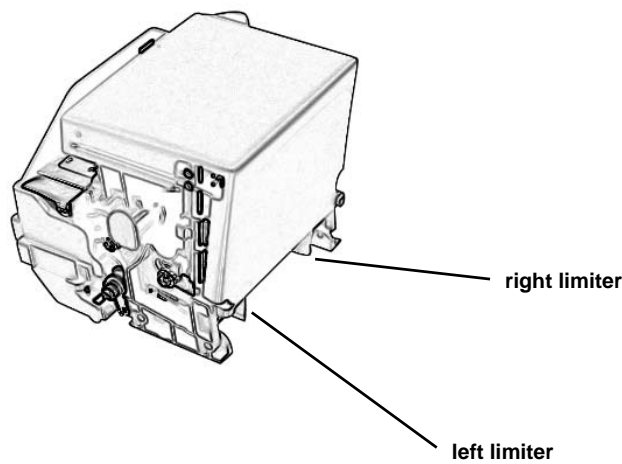


Fig. 9-12 Paper guidance of printer

## 9.2.7 Cleaning of printer

If you have problems with printing, check the printer for foreign objects:

1. Power off ticket terminal.
2. Remove tickets from printer.
3. Unmount the printer.
4. Push tabs right and left to the outside [fig. 9-13 C]
5. Open the printer [fig. 9-13 D]
6. If any cuts or foreign objects are visible, please remove with a brush or compressed air [fig. 9-13 E]
7. Close the printer after cleaning until both retaining tabs firmly engage
8. Insert and feed paper tickets; test print
9. If, despite cleaning, the printer does not work properly, return the printer for repair via your dealer.

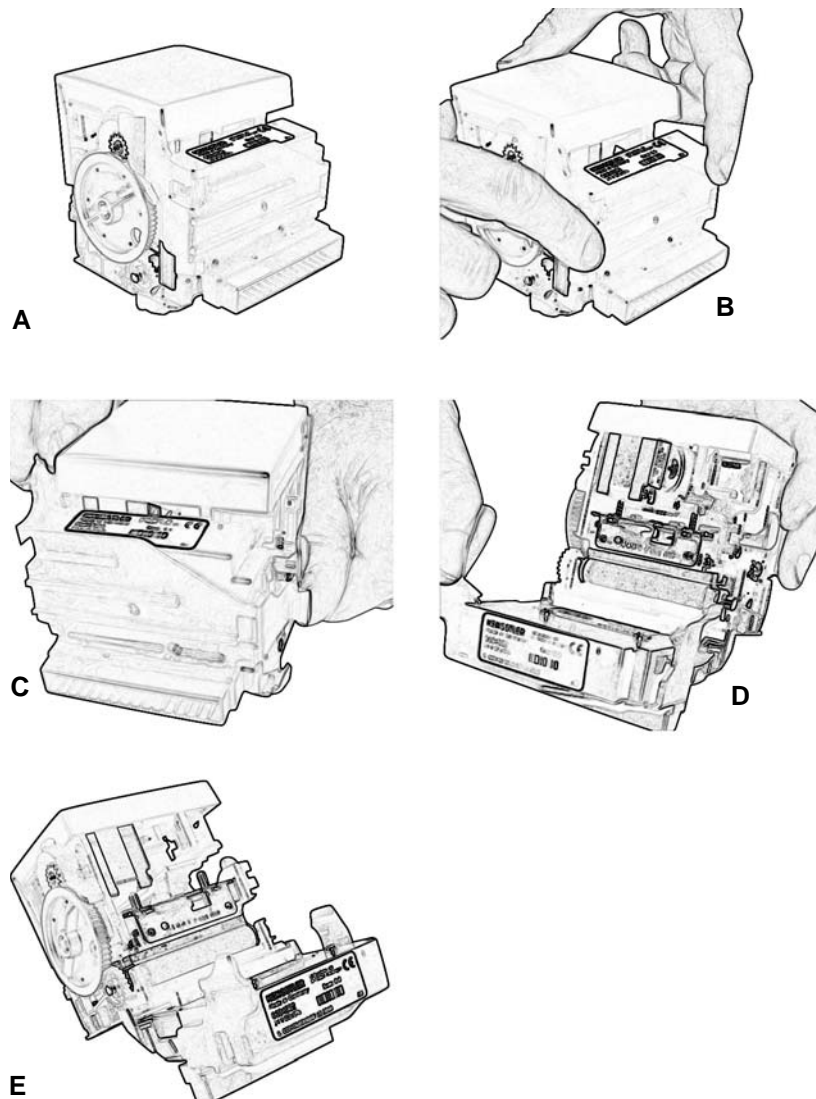


Fig. 9-13 Open printer

## 10 Disposal

Disassemble the ticket terminal for disposal and separate it into the individual material groups:

- plastics
- non-ferrous metals (e. g. copper scrap)
- aluminium
- electronic scrap
- steel

Dispose of the materials according to the national regulations.



## 11 Annex

**11.1 Declaration of Conformity**

in accordance with the EC Low Voltage Directive 2006/95/EC, Annex III, Section B

Herewith we declare that the following ticket terminal has been declared in conformity with the EC Low Voltage Directive 2006/95/EC.

Description of the electrical equipment:	Car entrance terminal Car exit terminal RV entrance terminal RV exit terminal Outdoor access terminal
Year of manufacture:	as of 2014
Relevant EC directives:	Low Voltage Directive 2006/95/EC as of 12 December 2006 Directive 2004/108/EC on electromagnetic compatibility as of 15 December 2004
Applied harmonised standards:	
Other applied technical standards and specifications:	Safety standards: DIN EN 61010-1:2011-07 EMC standards: DIN EN 61326-1:2013-06
Manufacturer:	Beckmann GmbH Brandtstr. 1 33161 Hövelhof Germany

Place, date: Hövelhof, 01 September 2014

Signature: \_\_\_\_\_

Identification of signer: Jürgen Beckmann, Managing Director



## 11.2 Stainless steel cleaning and maintenance instructions

### Explanations of the material

The material stainless steel is a particularly corrosion-resistant steel alloy that remains bright and "rust-free" under certain environmental and care conditions.

Our standard product version is made of V2A, made of the material 1.4301. This material is suitable for outdoor use in normal outdoor atmosphere. When used in aggressive environmental conditions, including, for example, seawater atmosphere and sulphurous acid in the air, we also offer our products in a powdered version.

### During / after installation

Steel sanding dust damages the stainless steel surface! Working with the cut-off wheel when mounting the columns or adjacent workpieces inevitably leads to punctiform corrosion spots (extraneous rust, pitting corrosion) on the surfaces.

The product is treated in delivery condition with a stainless steel care product. For low impurities during installation, it is best to remove the dust with a dry, clean cloth. When cleaning with a degreaser - warm water with dishwashing detergent (no glass cleaner) - the dried surface must then be sealed with a stainless steel care product.

Especially freshly sanded surfaces take some time to form a protective layer "passive layer"; that's why surface protection is essential for new products.

### During operation

The product should be cleaned regularly during operation and maintained with a special care product suitable for stainless steel. The frequency depends on the local conditions.

Salt spreading against ice formation is to be avoided in the immediate area of stainless steel components!

