

**Coder Models CO x70 TX, CO x70 TX/BC and
CO x70i TX, CO x70i TX/BC**

Installation & Maintenance Instructions

SKIDATA[™]
access unlimited



Version February 2003

SKIDATA AG

Technical Documentation
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Declaration of Conformity

The Coders of the COx70TX product family have been developed, designed and manufactured in accordance with the following EU directives:

R&TTE (99/5/EC)
Machinery (98/37/EC)

CE 0408 

List of EU countries where these Coders may be sold:

AT, BE, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, NL, PT, SE

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 COx70TX (all variants) unless expressly approved by SKIDATA™, may void the user's authority to operate this device.

Main Table of Contents	1
Introduction, Safety Requirements	2
Operation & Maintenance Coder models	3

Document Management – Version Table

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

Section	Document	Pages	Version	Date
1	Main Table of Contents	4	1.0	17-02-2003
2	Introduction, Safety Requirements	6	1.0	17-02-2003
3	Operation & Maintenance of Coder Models	24	1.0	17-02-2003

1

Contents

Version 1.0
4 Pages
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1.1 Contents

Contents	1
1.1 Contents	2
Introduction, Safety requirements	2
2.1 Contents	2
2.2 About this Documentation	3
2.2.1 Structure of this Document	3
2.3 Typographical Conventions	4
2.3.1 Text	5
2.3.2 Important product safety notice	5
2.4 Safety instructions	5
2.4.1 Danger of injury by rotating parts	5
2.4.2 Environmental conditions	5
2.4.3 Power cord	6
2.4.4 Warranty and liability	6
Operation & Maintenance	3
3.1 Contents	2
3.2 Installation	4
3.2.1 Space Requirements	4
3.2.2 Placement	4
3.2.3 Unpacking and Set-Up	5
3.2.4 Installing a Single-Hopper Module	6
3.2.5 Installing a Triple-Hopper Module	8
3.2.6 Installing the hopper attachment	8
3.3 Coder Components	10
3.4 Safety Notes	12
3.5 Preparing the Coder for use	13
3.5.1 Inserting Cards	13
3.5.2 Connecting the Coder and Power Supply	15
3.5.3 Connection of Coder and CashComputer	15
3.6 Maintenance	16
3.6.1 Removing the Housing Cover	16
3.6.2 Cleaning the Transport Path	17

3.6.3	Cleaning or replacing the Thermal print head / Barcode Reader	18
3.6.4	Cleaning the Transport Rollers	19
3.6.5	Cleaning the Separating Roller	21
3.7	Troubleshooting	22
3.7.1	Cards are not issued	22
3.7.2	Card stuck in mechanism	22
3.7.3	Cards are not Drawn In	23
3.7.4	Poor Print Quality	23
3.8	Technical characteristics	24
3.8.1	Data Carriers	24
3.8.2	Devices	24

2

Introduction, Safety Require- ments

Version 1.0
6 Pages
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2.1 Contents

2.1	Contents	2
2.2	About this Documentation	3
2.2.1	Structure of this Document	3
2.3	Typographical Conventions	4
2.3.1	Text	4
2.3.2	Important product safety notice	4
2.4	Safety Instructions	5
2.4.1	Danger of injury by rotating parts	5
2.4.2	Environmental conditions	5
2.4.3	Power cord	6
2.4.4	Warranty and liability	6

2.2 About this Documentation

This manual contains a description of the Series CO x70 TX and CO x70 TX/BC as well as the Series CO x70i TX and CO x70i TX/BC coding units, as well as instructions for the correct installation and connection of the device, and details on operation and maintenance.

NOTE: Throughout this documentation, Coder models CO x70 TX (or KeyPrinter), CO x70i TX, CO x70 TX/BC and CO x70i TX/BC are uniformly referred to as “COx70TX”, disregarding any distinction between 1-hopper and 3-hopper models.

2.2.1 Structure of this Document

Chapter 1 contains the main table of contents of this manual.

Chapter 2 (i.e. the chapter you are just reading) provides some general information about this documentation and its use, as well as a number of important safety instructions.

In **Chapter 3** you will find instructions on how to install and connect the coding units, as well as details on its operation and maintenance.

2.3 Typographical Conventions

Text passages which are of particular importance are highlighted by a different layout and special symbols.

2.3.1 Text

- Step-by-step instructions and listed items are printed in the form of bulleted lists . . .
- . . . just like this one.

Important hints and notes are printed in a box. Text passages like this usually caution the user against potential technical damage or health hazards. Boxed messages may also contain special instructions.

2.3.2 Important product safety notice

All safety instructions mentioned in this manual must be adhered to when installing or using the Coder COx70TX.

Failure to comply with these safety instructions may lead to personal injury and may also cause damage to the coding unit.

The following symbols are used throughout this document:



Warning against personal injury or technical damage.



Information regarding the appropriate use of a device, or important hints, explanations, etc.

2.4 Safety Instructions

- Coding models of series COx70TX may only be used for their intended purpose as declared by the manufacturer.
- Unauthorised modifications of coding units COx70TX or the use of components or ticket stock not approved by SKIDATA may cause personal injury to operating staff or damage the device. The manufacturer will under no circumstances accept any liability for personal injury or device damage resulting from unauthorised device modifications.

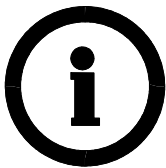
2.4.1 Danger of injury by rotating parts

**Caution – Danger of injury:**

Coder models COx70TX contain rotating gears and transport rollers, which pose a danger of bruising when moving. Always power off the device before opening the housing for maintenance purposes.

- Never reach into the device with your hand while it is running to avoid bruising your fingers.
- Persons with long hair should never bend over the device while it is open and running, as the hair may get caught in the gears, causing personal injury. The same applies to loose clothing such as scarfs or ties.

2.4.2 Environmental conditions



Warning: Avoid metal objects such as paper clips or screws from dropping inside the device, as these may short out the device or cause mechanical damage.

If any metal object does get inside the device, power off the device immediately. In case you are unable to remove the object without difficulty, please contact your SKIDATA technical support provider.

Always protect the device against liquids or rain. If any liquid substance should get inside the device, power off the device immediately and contact a SKIDATA technical support provider.



2.4.3 Power cord

Caution: A defective power cord may cause electric shock or fire.

In case the mains power cord (i.e., the cord connecting the power supply to an outlet) is damaged or worn, it must be replaced immediately.

2.4.4 Warranty and liability

In the event of damage to person or property, all warranty and liability claims shall be excluded if this damage is attributable to one or more of the following:

- Inappropriate use of the coding unit
- Improper installation of the printer
- Irregular or insufficient maintenance
- Use of material not approved by SKIDATA
- Insufficient training of operating personnel
- Unauthorised modifications of the printer or any parts thereof
- Disaster situations caused by impact of foreign bodies or force majeure

3

Operation & Maintenance

Coder Models

CO x70 TX and

CO x70 TX/BC

CO x70i TX and

CO x70i TX/BC

Version 1.0

24 Pages

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3.1 Contents

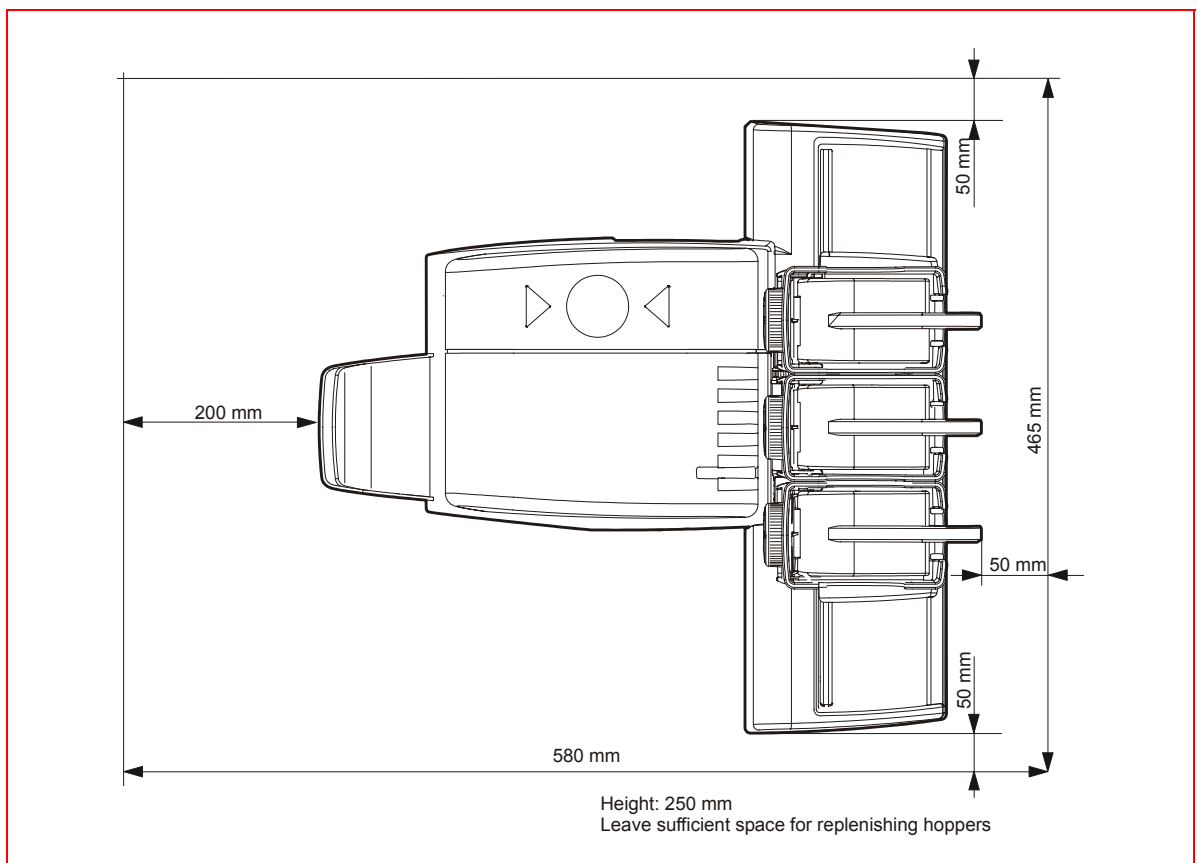
3.1	Contents	2
3.2	Installation	3
3.2.1	Space requirements	3
3.2.2	Placement	3
3.2.3	Unpacking and setup	4
3.2.4	Installing a single-hopper module	5
3.2.5	Installing a triple-hopper module	7
3.2.6	Installing the hopper attachment	7
3.3	Coder Components	9
3.4	Safety Notes	11
3.5	Preparing the Coder for use	12
3.5.1	Inserting cards	12
3.5.1.1	Adjusting the hopper attachment	12
3.5.1.2	Filling the card hoppers	13
3.5.2	Connecting the Coder and power adapter	14
3.5.3	Connecting the Coder to the CashComputer	14
3.6	Maintenance	15
3.6.1	Removing the housing cover	15
3.6.2	Cleaning the transport channel	16
3.6.2.1	Printing test cards	16
3.6.3	Cleaning or replacing the thermal print head	17
3.6.4	Cleaning the transport rollers	18
3.6.5	Cleaning the separating roller	20
3.7	Troubleshooting	21
3.7.1	Cards are not issued	21
3.7.2	Card stuck in mechanism	21
3.7.3	Cards are not drawn in	22
3.7.4	Poor print quality	22
3.8	Technical Characteristics	23
3.8.1	Data carriers	23
3.8.2	Devices	23

3.2 Installation

3.2.1 Space requirements

Select a location that provides sufficient space on all sides of the Coder. The operating surface should be at least 580 x 470 mm.

Fig. 1: Space requirements



3.2.2 Placement

When choosing a space to set up the Coder and power adapter, please note the following:

Main unit

- The Coder should be set up on a stable, flat surface, such as a desk.
- The Coder must be protected from direct sunlight, excessive heat, humidity and dust.
- Make sure that all cables are readily accessible for connecting and disconnecting.

- The oder must be easily accessible for operation and maintenance work.

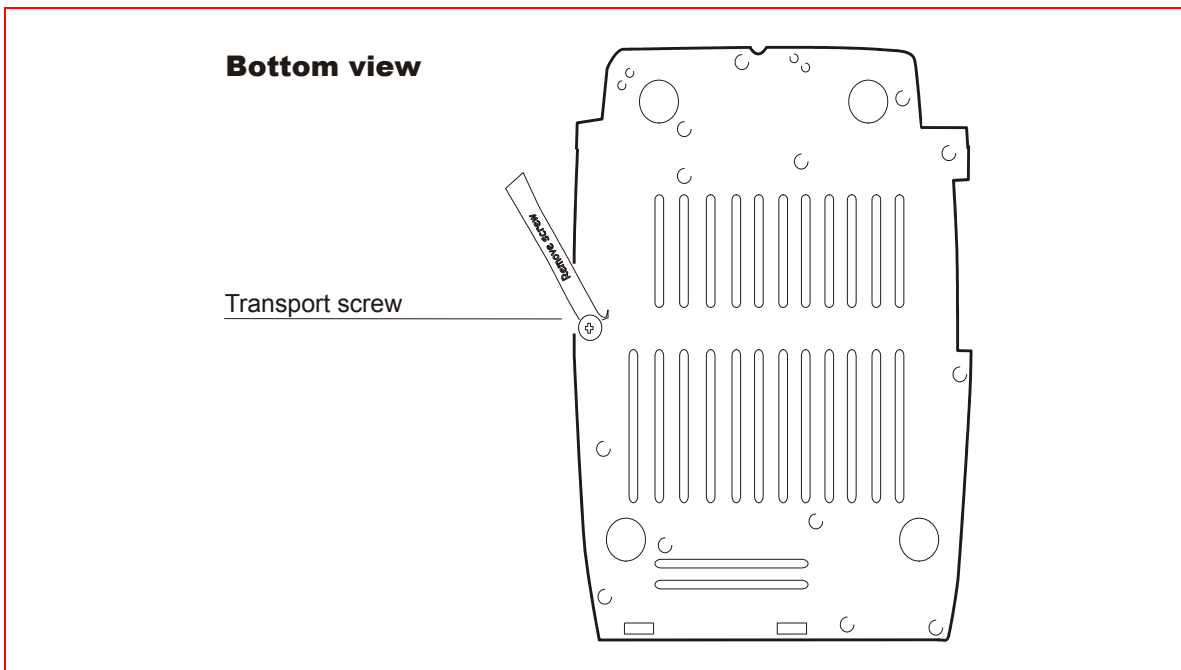
Power adapter

- Dimensions (mm): W x H x D: 120 x 70 x 240 (110 x 70 x 210)
- Make sure that the ventilation slits of the power supply are not obstructed

3.2.3 Unpacking and setup

- Grasp the Coder by the carriage with both hands and lift it out of the packaging.
- Remove the transport screw at the bottom of the device.

Fig. 2: Removing transport screw



3.2.4 Installing a single-hopper module

- Take the hopper unit out of the packaging.
- Place the carriage at the base of the coder and slide it in as far as it will go (see Fig. 3: Installing the single-hopper module).
- Secure the carriage to the main unit using the four locking screws (see Fig. 4: Single-hopper module attached to the Coder).

Fig. 3: Installing the single-hopper module

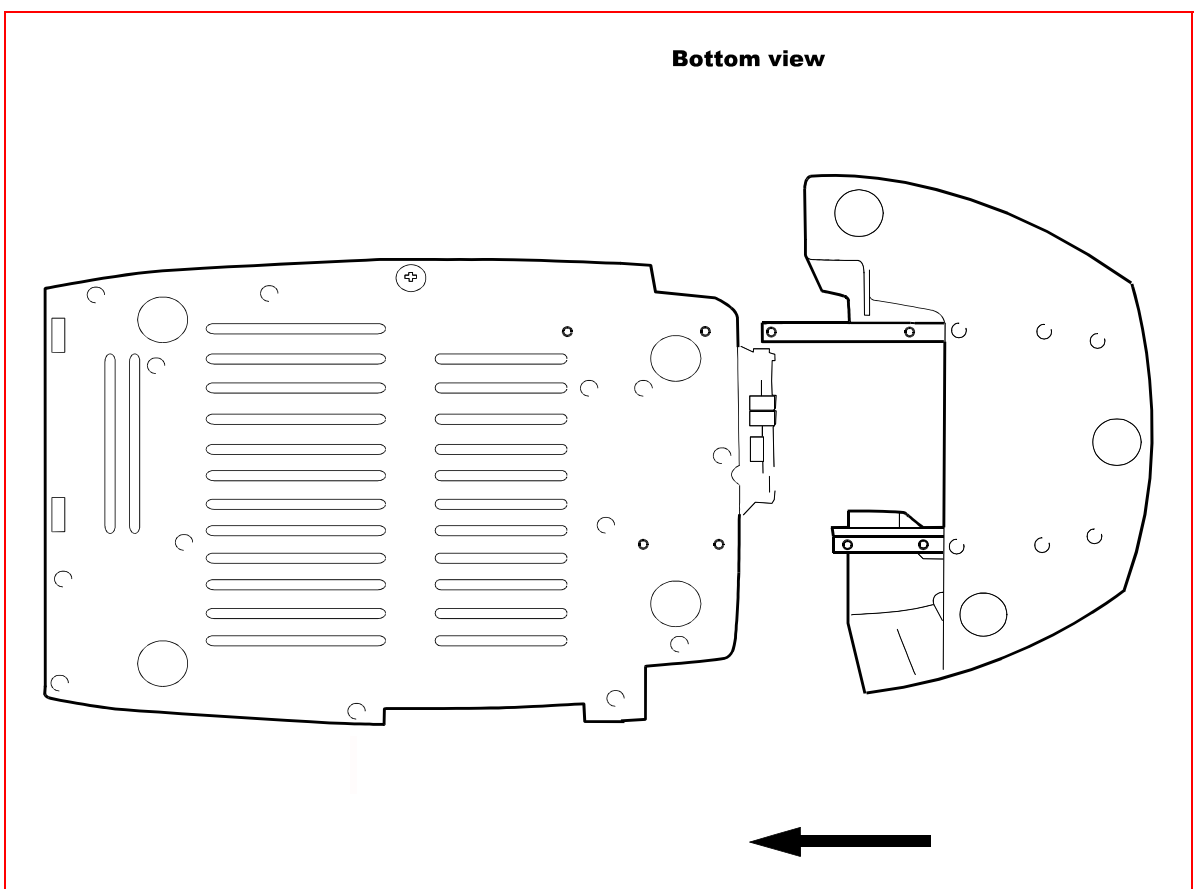
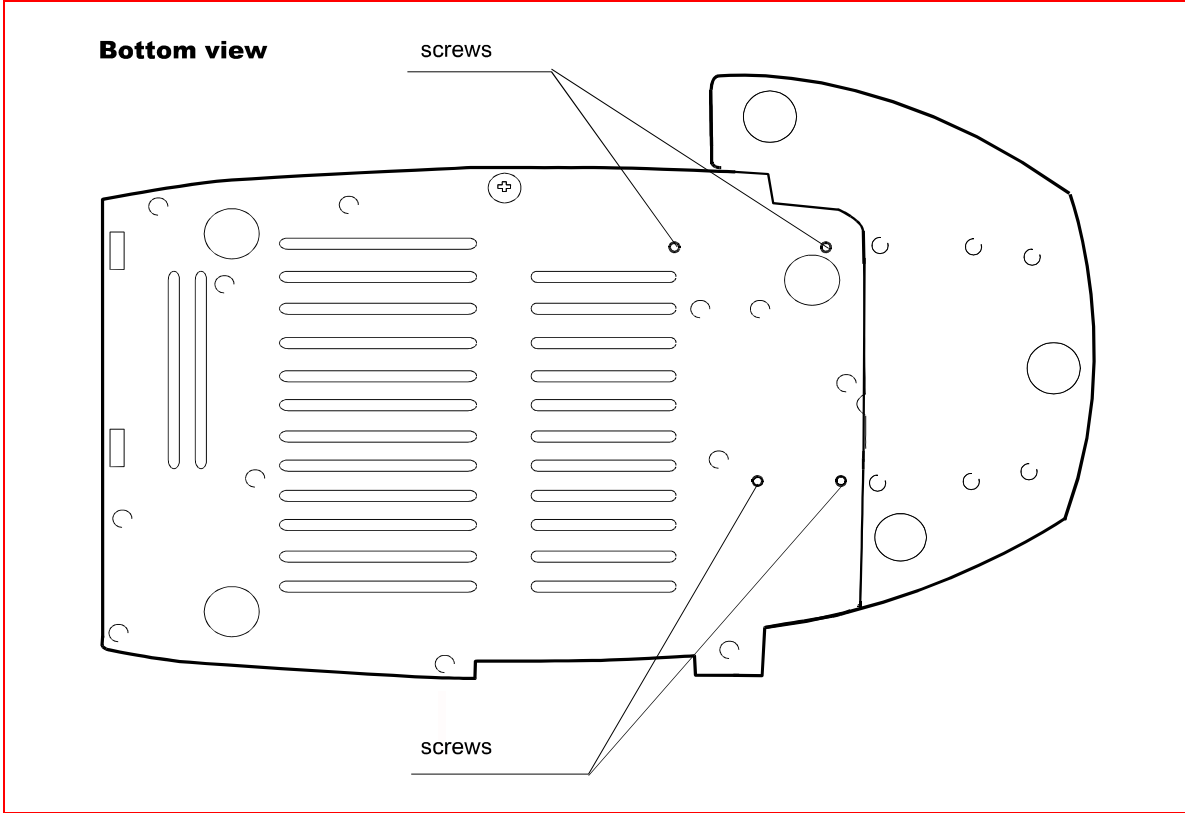


Fig. 4: Single-hopper module attached to the Coder

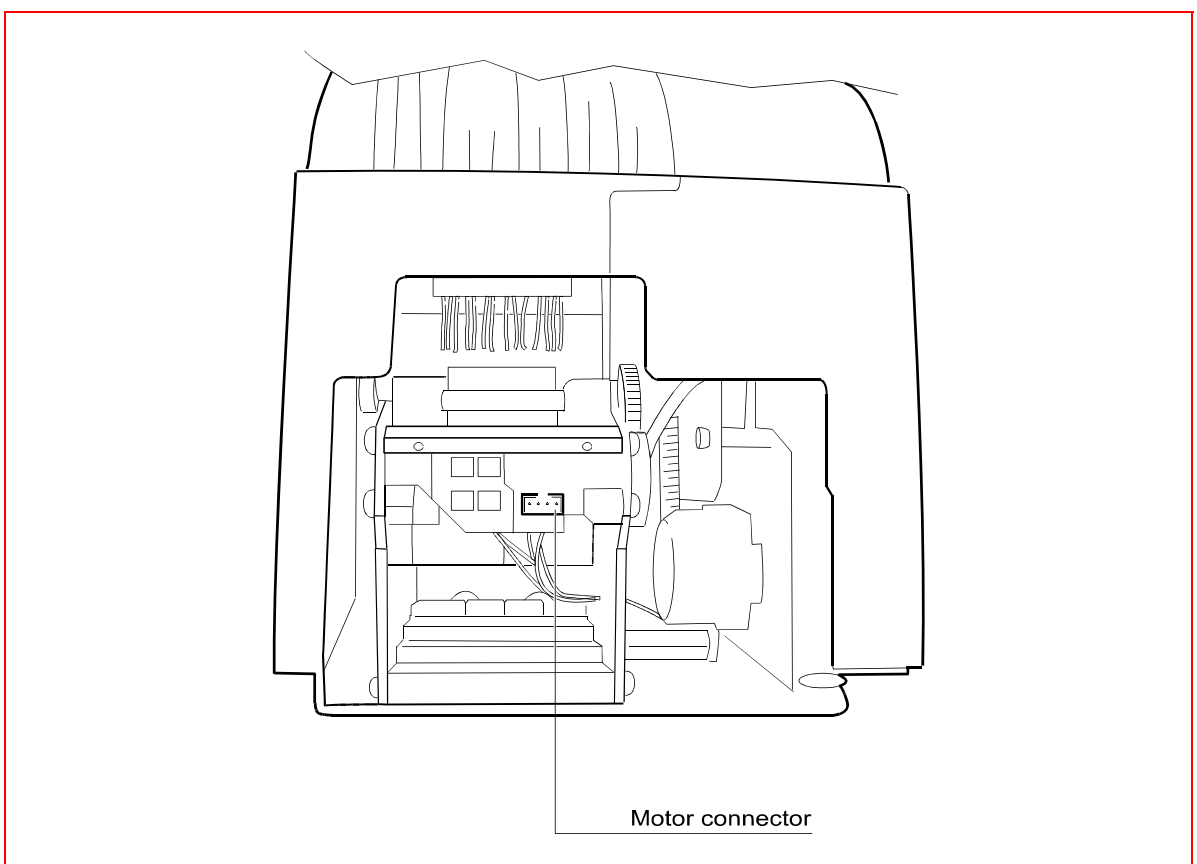


3.2.5 Installing a triple-hopper module

The assembly of the triple-hopper version is the same as described in section 3.2.4 Installing a single-hopper . However, the 3-hopper attachment additionally requires the carriage drive motor to be connected to the basic mechanical array.

- To do so, hook up the motor cable to the connector on the motor.

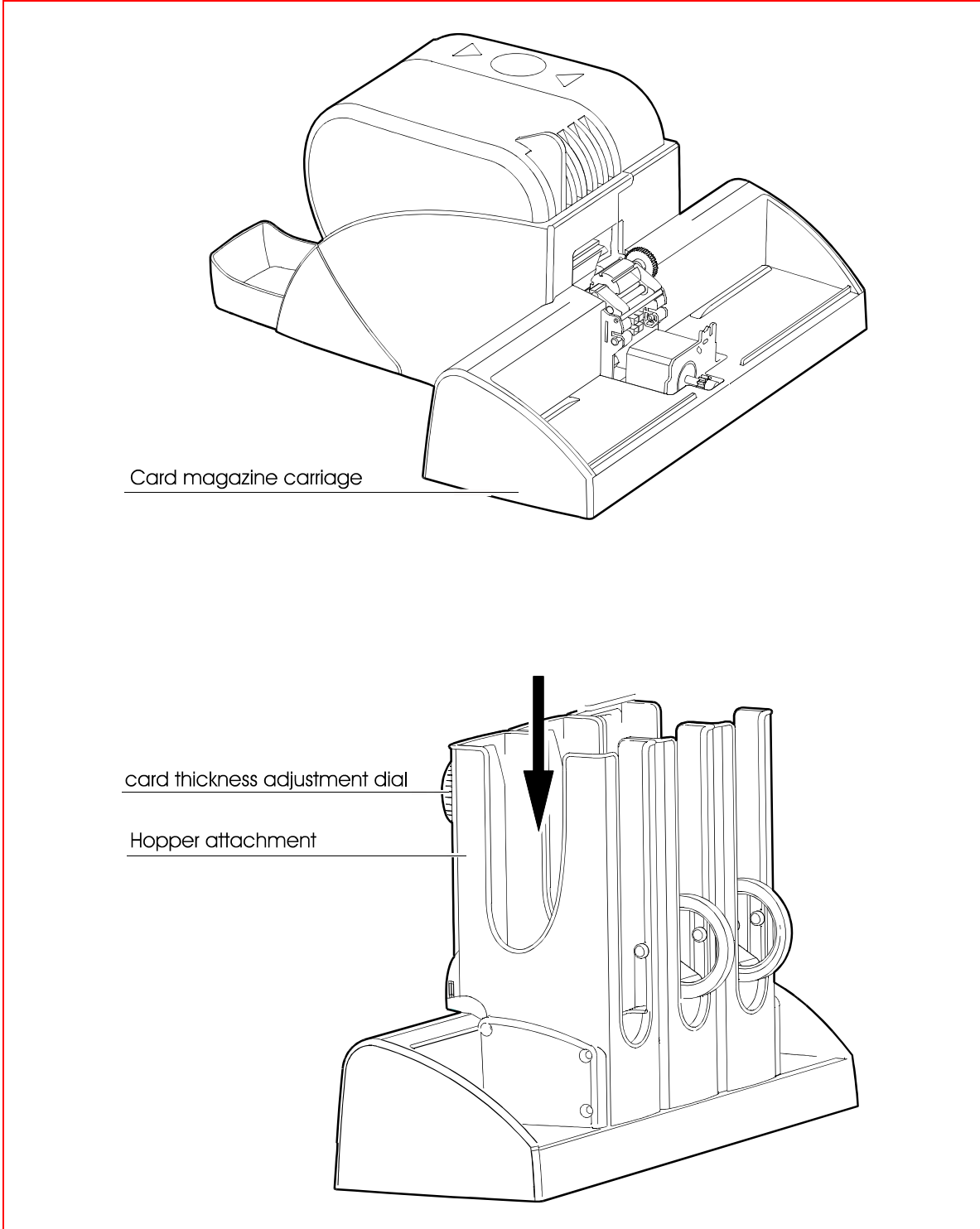
Fig. 5: Motor connector for triple-hopper module



3.2.6 Installing the hopper attachment

Unpack the plastic hopper attachment and place it carefully onto the drive assembly as shown in Fig. 6. Make sure that the adjustment dials face forward (towards the Coder).

Fig. 6: Installing the hopper attachment



3.3 Coder Components

Fig. 7: Components – view of right side, view of left side

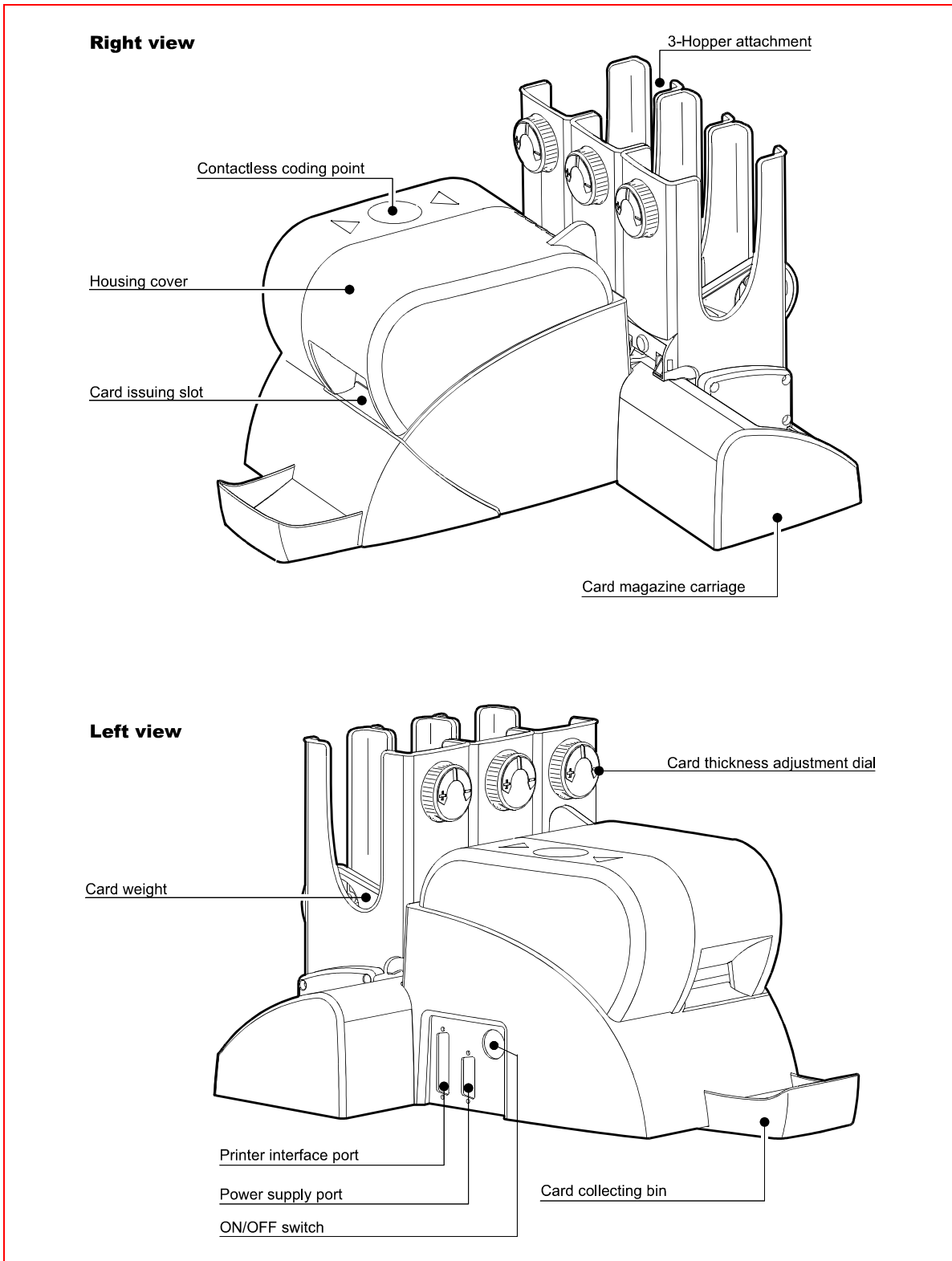
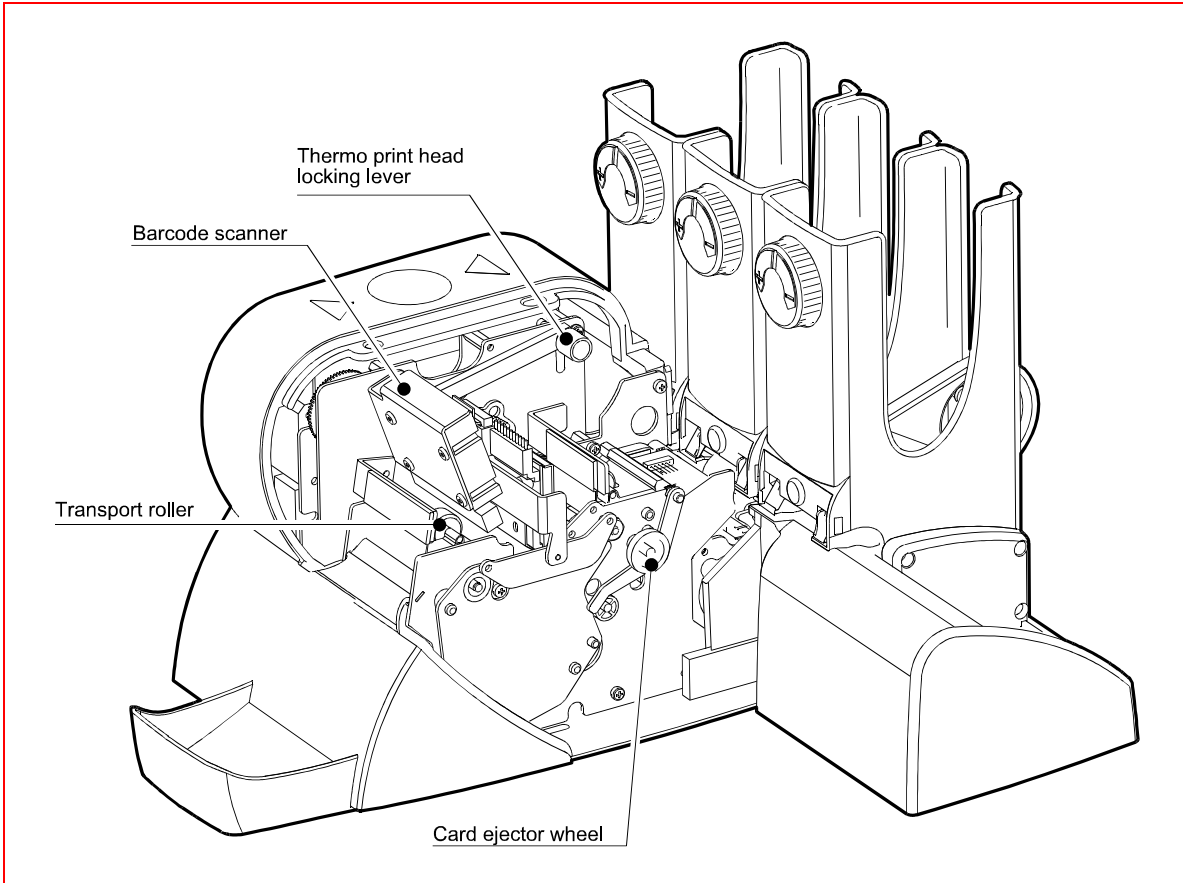


Fig. 8: Components (inside view)



3.4 Safety Notes



Warning: The Coder is equipped with rotating toothed wheels and transport rollers.
Always switch off the Coder before opening the housing cover!

- Keep fingers, etc. away from an open Coder when switched on - this can lead to injury, especially pinched fingers.
- Be careful of hopper attachment movement – do not place hand between housing and hopper attachment when unit is switched on!
- Persons with long hair should never bend over the device to open it while it is powered on (this is to prevent injury resulting from the hair getting caught in the drive mechanism).
- Hot thermal print head:
CAUTION: When opening the device, never touch the print head while the unit is in operation or shortly afterwards. Doing so may cause serious burns.

3.5 Preparing the Coder for use

3.5.1 Inserting cards

The hopper attachment has three hoppers for three different kinds of blank cards. The thickness of the blank cards depends on the material (cardboard, PVC, etc.). Adjust the card thickness of the hopper before filling.

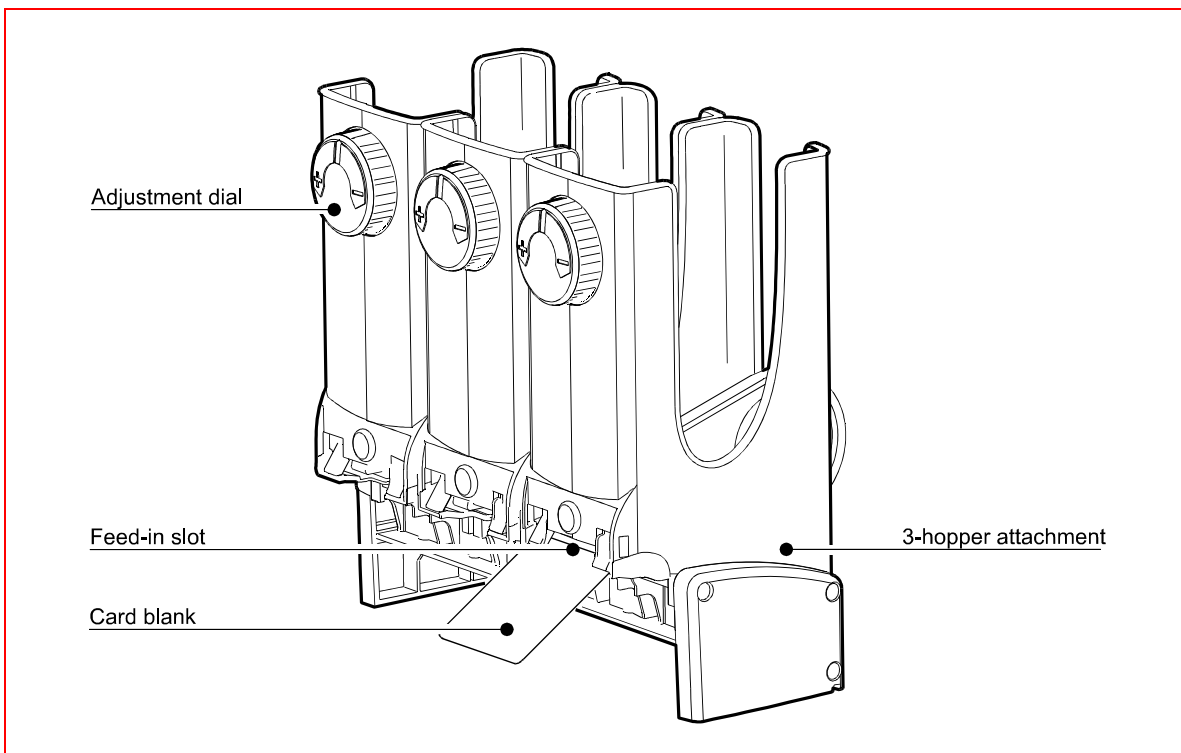
3.5.1.1 Adjusting the hopper attachment

- Remove the hopper attachment from the carriage.
- Insert the blank card into the feed-in slot of the appropriate hopper.
- Rotate the adjustment wheel clockwise (–) until the card is in position.
- Loosen adjustment wheel (+) until the card can be removed easily.

Repeat the adjustment process if the cards are not being drawn in properly or when two cards are drawn in simultaneously.

Readjust when switching to a different type of blank card.

Fig. 9: Adjusting hopper attachment

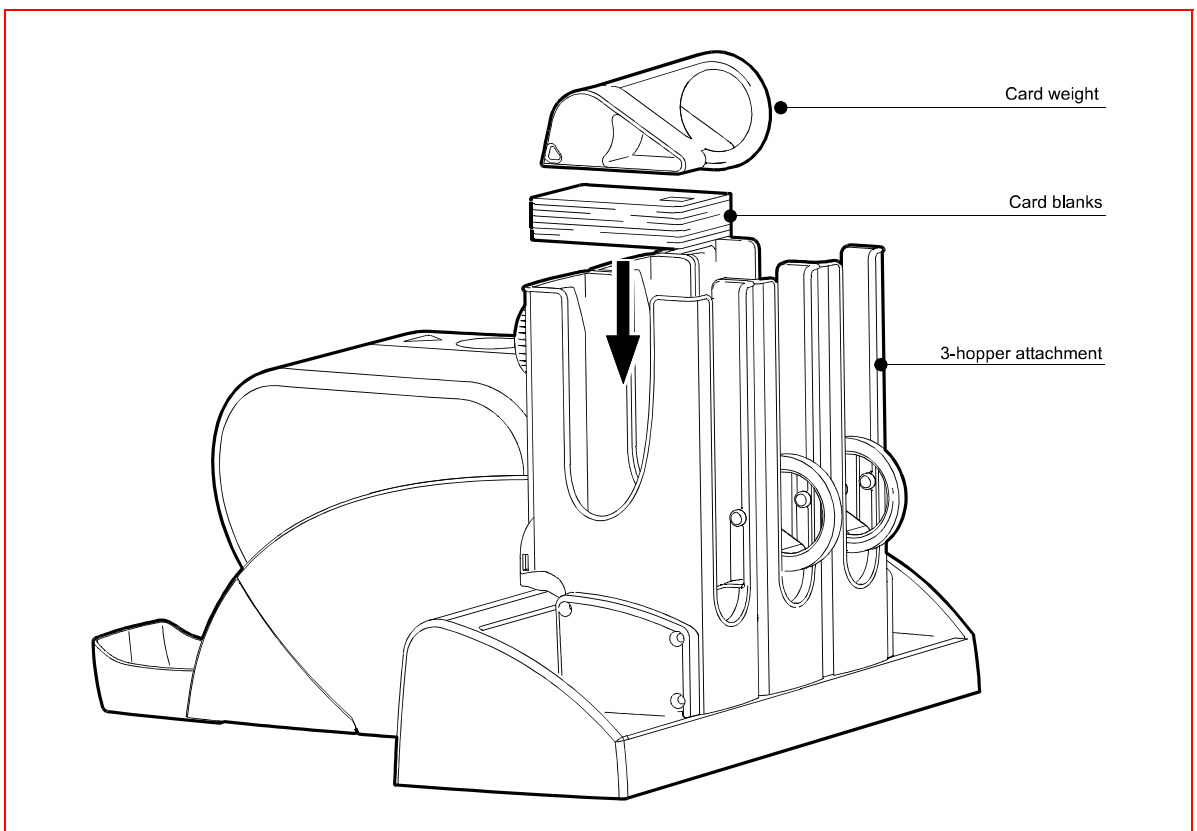


3.5.1.2 Filling the card hoppers

The card hoppers can be filled completely with blank cards. Make sure that sufficient space remains for the weight.

- Load card stock into the card hopper. Make sure that cards are inserted properly and are not tilted.
- Place the card weight on top of the stack.

Fig. 10: Loading cards



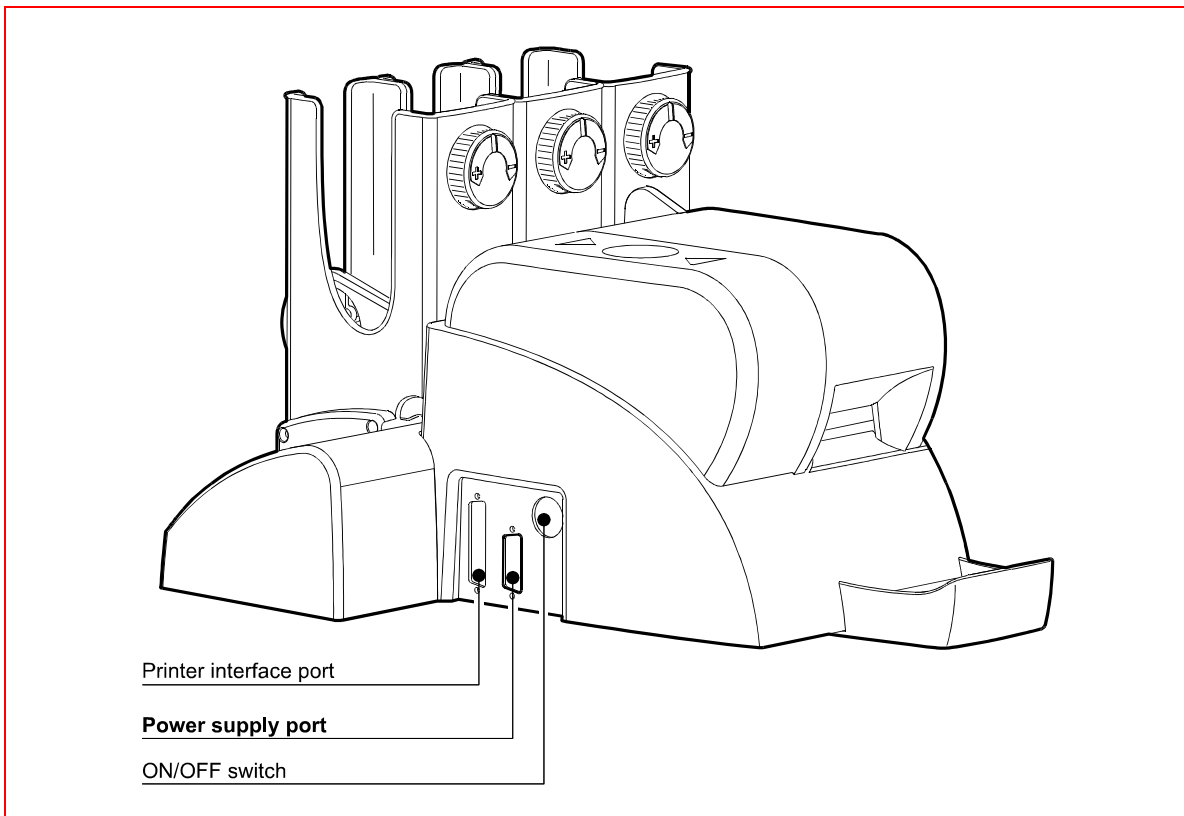
Single cards can also be fed through the card output slit independent of the control software configuration.

3.5.2 Connecting the Coder and power adapter

The Coder is supplied with operating power by an external power adapter.

- Make sure that the Coder is switched off.
- Plug the power cord into the Coder and screw in both locking pins.
- Attach the cold device connector to the power adapter and plug the power adapter into a shockproof mains socket.

Fig. 11: Power supply



3.5.3 Connecting the Coder to the CashComputer

The Coder is equipped with a parallel interface for connection of a Coder cable.

- Connect the printer cable to the parallel interface port on the Coder; screw in locking pins.
- Plug the other end of the cable to the parallel interface port on the CashComputer; screw in locking pins.

3.6 Maintenance

To ensure optimum operation of the Coder, it should be cleaned as needed at more or less regular intervals, depending on frequency of use.

- Switch off Coder before performing maintenance work!



Important: Never clean the Coder with solvents or thinners - these substances can damage parts and the housing. As legal regulations prohibit the shipping of flammable liquids, the cleaning kit contains an empty bottle which should be filled with cleaning spirit.

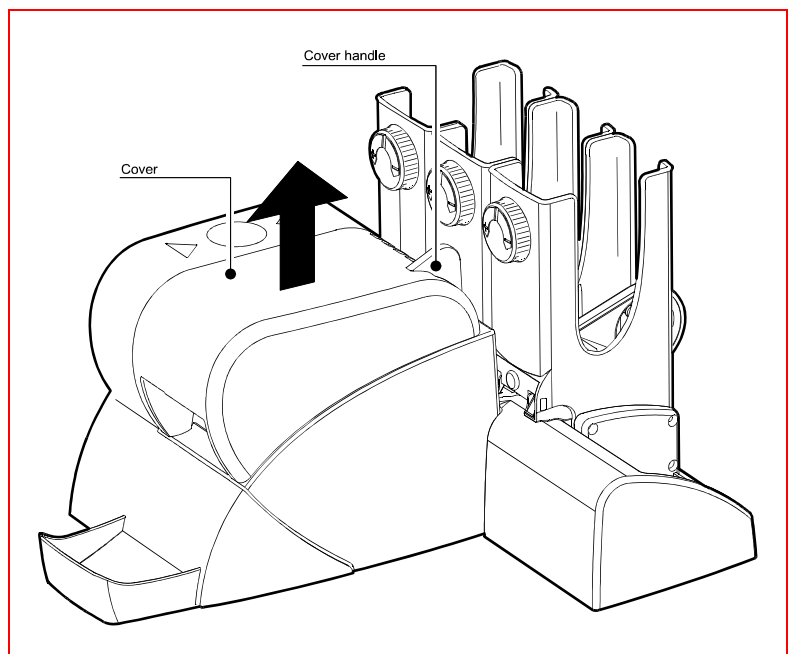
Perform the following maintenance tasks:

- Clean transport path with cleaning card
- Clean or exchange printing head
- Clean transport rollers
- Clean separating roller

3.6.1 Removing the housing cover

- Remove housing cover by lifting it up.

Fig. 12:
Opening housing



3.6.2 Cleaning the transport channel

This requires the SKIDATA COx60/COx70 cleaning set:
Item number: CPZUBEHÖR4113;

The transport path should be cleaned with a cleaning card after printing approximately 2000 cards.

- Dampen fleeced side of cleaning card with cleaning fluid; shake off any excess.
- Launch cleaning function in CashComputer application
- Insert cleaning card (fleeced side up) into Coder from front. Cleaning card will be moved along transport path several times and then expelled.
- If desired, check print quality by printing test card – white test cards have been provided in cleaning set.

3.6.2.1 Printing test cards

If the Coder cable is not connected, a test card will be printed automatically when the unit is switched on.

At first, the unit will try to draw in a card from the front slit. If a card is not inserted within one second, a blank card will be drawn from the card magazine.

- Switch off Coder
- Disconnect Coder cable
- Switch on Coder
- Insert test card into front of unit

3.6.3 Cleaning or replacing the thermal print head

The thermal print head should be cleaned whenever printing quality becomes unsatisfactory, but at least every 5,000 printing cycles. If cleaning does not improve the printing quality, you should replace the thermal print head.

When handling the thermal print head, be careful not to damage the delicate printing line.

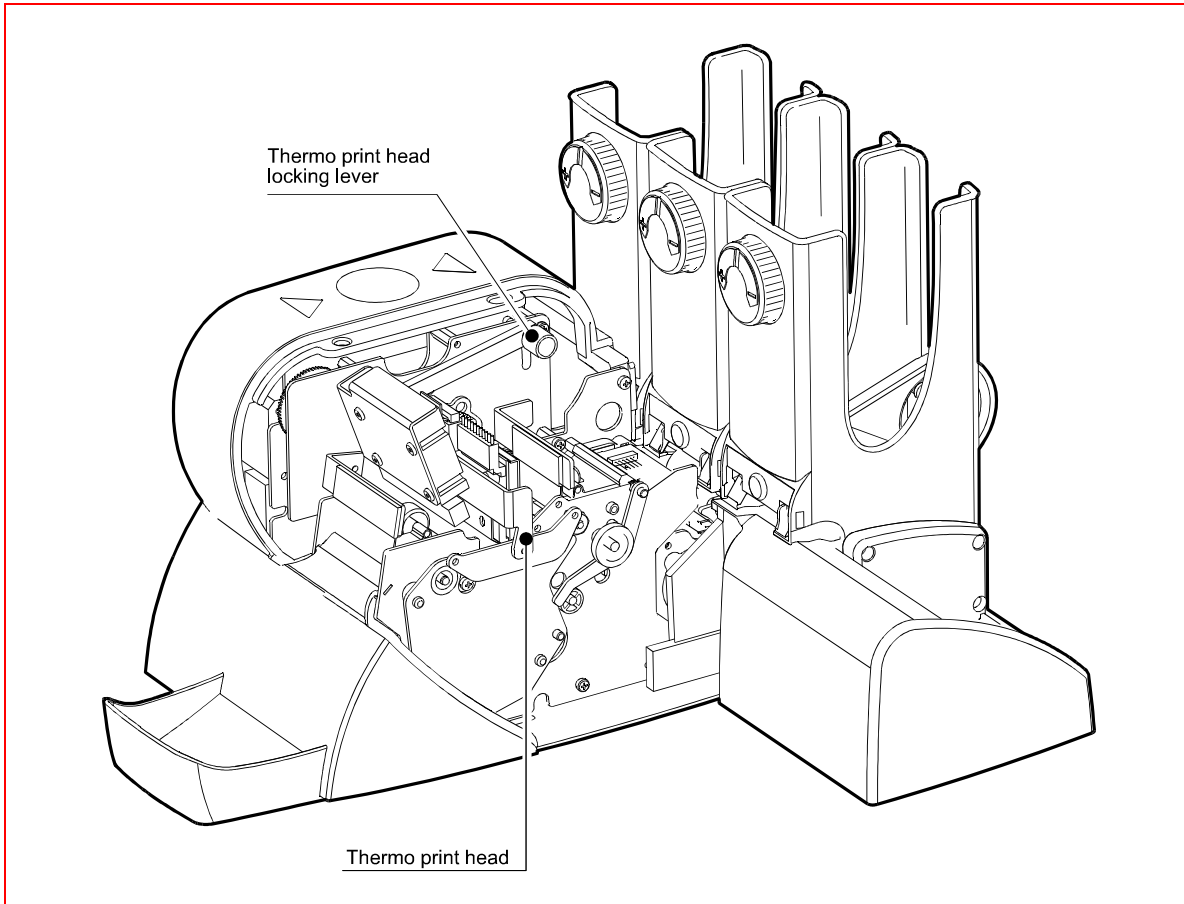
Deinstalling the thermal print head

- Switch off the Coder and disconnect the power cable.
- Unplug the print head connection cable.
- Push up the thermal print head locking lever.
- Remove the thermal print head.



Please note: The thermographic elements of the print head are quartz glass coated. Any external physical impact (e.g., rough handling) can damage this coating, making the entire print head unusable.

Fig. 13: Cleaning the thermal print head



- Moisten a soft, lint-free cloth with some cleaning spirit and use it to clean the printing line of the thermal print head. Make sure that no liquid gets on any other part of the print head.

Installing the thermal print head

- Raise the clamping lever on the print head, then position the print head on the locking pin and adjust and lower clamping lever.
- Plug in the print head cable.

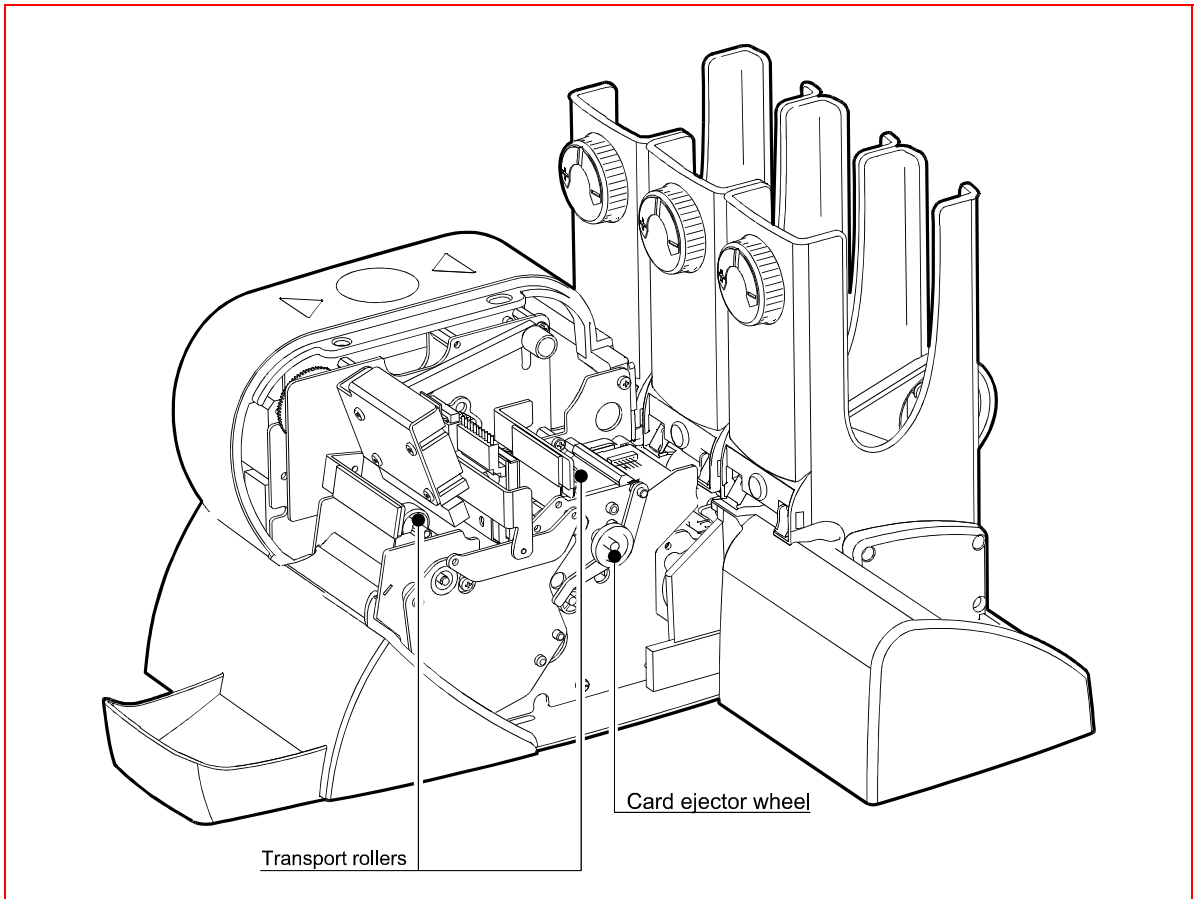
3.6.4 Cleaning the transport rollers

The transport rollers should be cleaned after printing 5000 cards.

- Switch off Coder and disconnect power cable.
- Dampen soft, lint-free cloth with small amount of cleaning fluid (provided in cleaning set).

- Clean transport rollers while rotating manually with card ejector wheel.

Fig. 14: Cleaning transport rollers

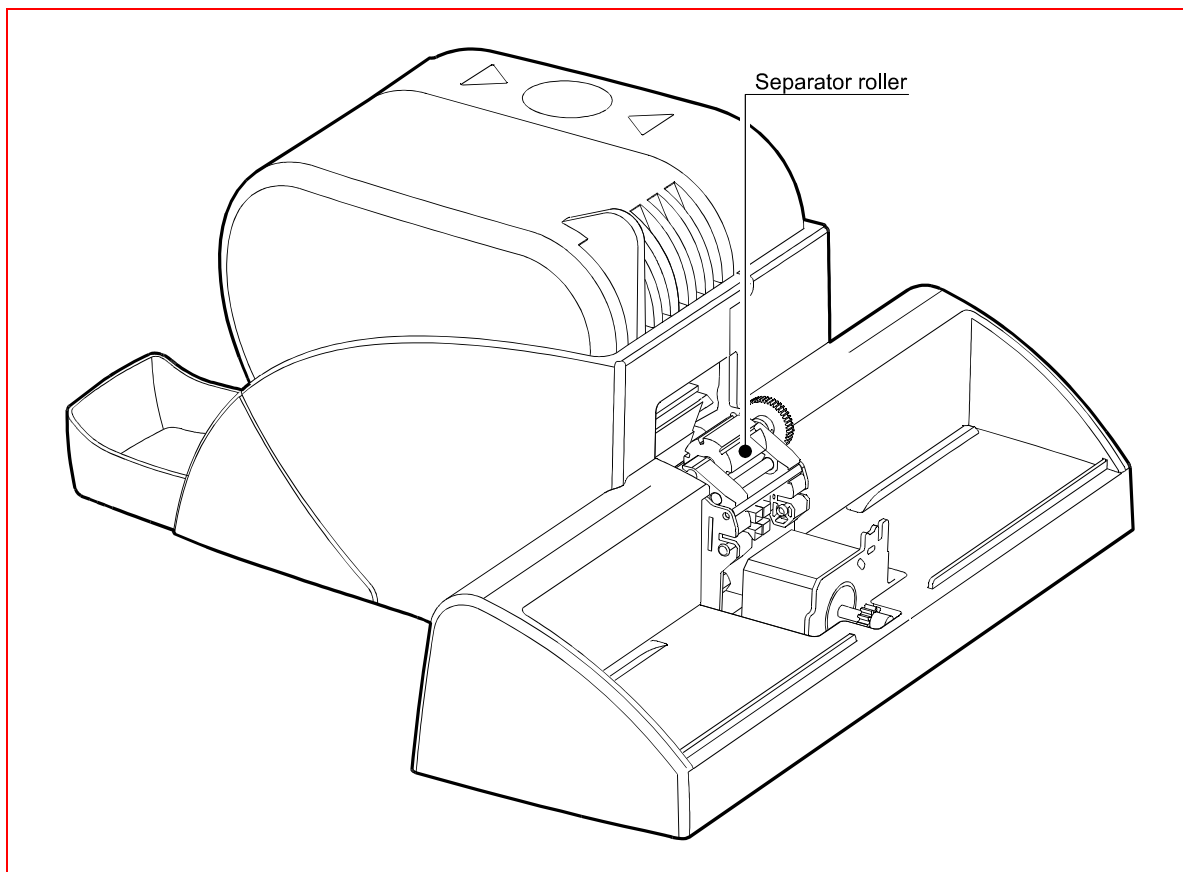


3.6.5 Cleaning the separating roller

The separating roller draws individual cards from a hopper and into the Coder. Dirt reduces the separating roller's grip and could result in malfunction.

- Lift the hopper attachment from card magazine carriage.
- Dampen soft, lint-free cloth with small amount of cleaning fluid (provided in cleaning set).
- Tilt rocker with separating roller forward.
- Clean separating roller while rotating manually with toothed wheel located next to roller.

Fig. 15: Cleaning the separating roller



3.7 Troubleshooting

The following section provides help for diagnosing and eliminating problems. Most problems can be eliminated most efficiently by closely following the steps listed below. Should you be unable to solve problems and require help, please prepare an exact description before contacting our technical support department.

3.7.1 Cards are not issued

Cards are not issued; Coder does not respond.

Switching off the Coder and then back on will make the card transport unit operational for a short period – this will show whether the Coder is functioning properly.

- Printer cable between CashComputer and Coder might be loose at either end - check connection at both ends; tighten safety pins.
- Power supply cable might not be plugged in firmly enough - check connection at power supply and socket.
- Socket is dead - check by plugging an operational electrical device into socket.

3.7.2 Card stuck in mechanism

Cards become stuck in the Coder.



Important: Do not use pointed metallic tools to remove a card, as this can damage the Coder's mechanical and/or electronic components.

- The blank cards in the magazine are bent or damp - check the quality of the blank cards and replace them if necessary.
To remove a stuck card: Switch off Coder; open housing cover; carefully transport card to ejection slit by turning ejector wheel or pull up and out of unit. Make sure that card is removed in its entirety and pieces do not remain in Coder.

3.7.3 Cards are not drawn in

Cards are not being drawn in from the hopper attachment.

- The hopper attachment has not been adjusted properly – take out the hopper attachment and adjust the hopper (see Preparation of Coder)
- Separating roller is dirty – remove and clean separating roller (see Maintenance).

3.7.4 Poor print quality

The quality of the imprints is unsatisfactory or there are white stripes.

- Thermal print head is dirty or defective– remove and clean. If this does not produce satisfactory results, replace thermal print head (see Maintenance).

3.8 Technical Characteristics

3.8.1 Data carriers

Tab. 1:
Technical data - data carriers

	Tickets	KeyCards
Coding method:	Barcode	Contactless
Printing type– visual imprint:	Thermographic	Thermographic
Card material:	Paper or PVC with thermo-sensitive coating	PVC with thermo-sensitive label
Card format:	ISO	ISO
Card thickness:	0.4 mm max.	1.0 mm max.
Capacity of card magazine	Paper: approx. 400 Thermo Re-Write: approx. 160	approx. 160

3.8.2 Devices

Tab. 2:
Technical data - devices

	KeyPrinter	Power supply
Power supply	24 VDC	85 – 260 VAC; 47 – 63 Hz.
Power consumption	max. 200 W	120 W ED=100%; 240 W ED ≤ 35%*
Operating temperature:	0 – +35 °C	-10 – +70 °C
Storage temperature:	-10 – +70 °C	-30 – +85 °C
System of protection	IP 20	IP 20
Dimensions in mm	W x H x D: 365 x 250 x 330 mm	W x H x D: 120 x 70 x 240 mm (110 x 70 x 210 mm)
Weight	8.2 kg	1.7 kg

* ED: German abbreviation for “operating duration”

