

OKIMAT 4 IPS, OKIMAT 4 IPSe
OKIMAT 4 EPS, OKIMAT 4 EPSe
OKIMAT 4 SL

Installation Instructions

Foreword

Document revision history

Version	Datum	Änderung
1.0	03/2015	First Release
2.0	04/2016	Release II
3.0	05/2017	Release III
4.0	06/2018	Release IV
5.0	12/2018	Release V
6.0	02/2020	Release VI
7.0	05/2020	Ratings plate, toggle, declaration of incorporation and of conformity
8.0	05/2022	Connecting the battery (9V)
9.0	08/2022	Power supplies notice
10.0	09/2022	Non-rechargeable, alkaline battery notice
11.0	01/2025	Okimat 4 SL added

Disclaimer and Exclusion of Liability

DewertOkin is not responsible for damage resulting from:

- failure to observe these instructions,
- changes made to this product which have not been approved by DewertOkin, or
- the use of replacement parts which have not been approved or manufactured by DewertOkin.

Address of manufacturer

DewertOkin Kft.

Szent István krt. 24.

6000 Kecskemét Hungary

Tel: +36-76/515-600

Creation of a complete operating instruction manual for the entire end product

These instructions are only intended to be used by the end-product manufacturer. They should not be given to the operator of the end product. The factual information contained within may be used as a basis when creating the end-product manual.

The warning and danger notices are best suited for use in the end product's manual. However it is not sufficient to simply follow these notices. You should also carry out an internal risk assessment for your end product. This can then be used as the basis for the safety notices in your manual.

These installation instructions do not contain all information required to safely operate the end product. They only describe the installation and operation of the drive as partially completed machinery.

The instructions are intended for the technicians responsible for manufacturing an end product and not for the operators of the end product.

Notice for customers in EU nations

Testing and Certification Bodies Test Label

The design and construction of the OKIMAT 4 have been inspected by the corresponding product service inspection and certification bodies.

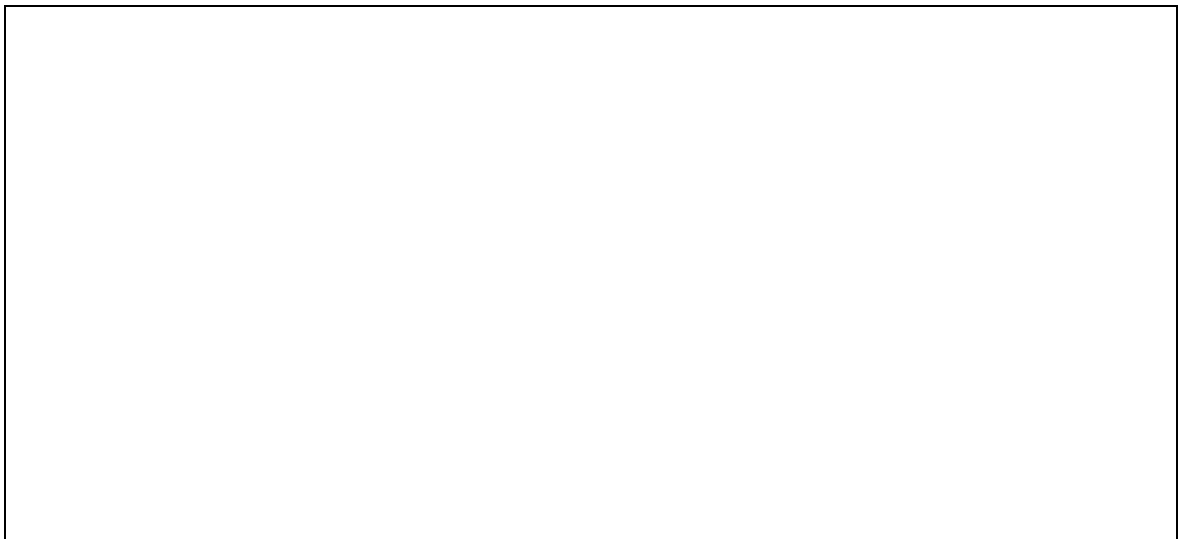


Figure 1 Product Service Test Label

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1. General Information

- ▶ The name "OKIMAT 4" shall be used to refer to the models OKIMAT 4 IPS, OKIMAT 4 IPSe and OKIMAT 4 EPS, OKIMAT 4 EPSe and OKIMAT 4 SL, unless there is a reference to a specific model.

These installation instructions must be followed closely in order to install this drive successfully and safely in the end product. These instructions are not an operating manual for the end product.

These instructions will help you to minimize danger, repair costs and down times. They will also help you to maximize the reliability and lifespan of the end product.



CAUTION

The notices in these instructions must be followed! Following the guidelines during installation and connection procedures will help to minimize:

- the risk of accident and injury, and
- damage to the drive system or the end product.

These installation instructions have been written with due care and attention. However, we cannot guarantee that the data, images and drawings are complete and correct nor do we accept any liability for the information contained therein, unless required by law.

Availability of this document

As manufacturer of the end product, you are obligated to comply with Machinery Directive 2006/42/EC. This directive stipulates that the installation instructions must be kept on file for governmental inspection purposes.

1.1 Safety notices within the installation instruction and the operating instructions for the entire machine

The manufacturer of the end product is only permitted to operate the OKIMAT 4 drive (by itself an incomplete machine)

- when the end product (for which the OKIMAT 4 drive is intended) is in compliance with all protective measures specified in the Machinery Directive 2006/42/EC, and
- when the manufacturer expressly declares the compliance of the end product.

The manufacturer of the end product must create a manual for the users of that product. The safety notices in the end-product manual must be written based on the end product's risk assessment.

1.2 Conventions used

Notices which do not relate to safety are indicated in these instructions with a triangle:

- ▶ Triangular notice symbol

Safety notice explanations



CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices which are not related to personal injury but may result in damage to the product or surroundings.

2. Safety notices

2.1 Proper and intended usage

The OKIMAT 4 drive is meant to be installed in beds.

- They provide motor adjustment capabilities for movable reclining bed parts. They should be used in conjunction with suitable brackets and mechanics.



CAUTION

Risk of accident

This drive should only be used for the applications described above. Any other use is forbidden. Improper usage can lead to accidents or destruction of the unit. Such non-approved applications will lead immediately to the expiration of all guarantee and warranty claims on the part of the end-product manufacturer against the manufacturer.

Improper usage

Be sure to follow the notices below concerning improper usage. You should include them in your product manual in order to inform the users of your end product.

The OKIMAT 4 drive should not be used:

- in any environment where combustible or explosive gases or vapours (e.g., anaesthesiology) may be present,
- in a moist environment,
- outdoors,
- in any application that will be cleaned with an automated washing system,
- with forces which exceed those specified on the ratings plate.

The OKIMAT 4 drive can be used by children of 8 years and older, persons with reduced physical, sensory or mental capabilities, or persons with lack of experience or knowledge when they are supervised or instructed concerning the safe use of the device and when they understand the resulting risks. Do not allow children to play with this device. The cleaning and user maintenance must not be carried out by children without supervision.

- ▶ You should only use spare parts which have been manufactured or approved by DewertOkin. Only these parts will guarantee a sufficient level of safety.

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Optional: battery-operated reset function

<i>NOTICE</i>
The battery-operated reset function is not a safety system and does not avert danger.

DewertOkin does not guarantee that the drive will function in the event of a power outage.

If the end-product manufacturer chooses to guarantee the functionality of the end product during a power outage, then the end-product manufacturer is responsible for arranging a mechanism to ensure this functionality.

2.2 Selection and qualification of personnel

The installation of the drive in the end product may only be performed by qualified personnel.

OKIMAT 4

2.3 OKIMAT4 (IPS / IPSe) ratings plate

- ▶ The ratings plates shown are examples; the specifications for your drive may differ from this illustration.

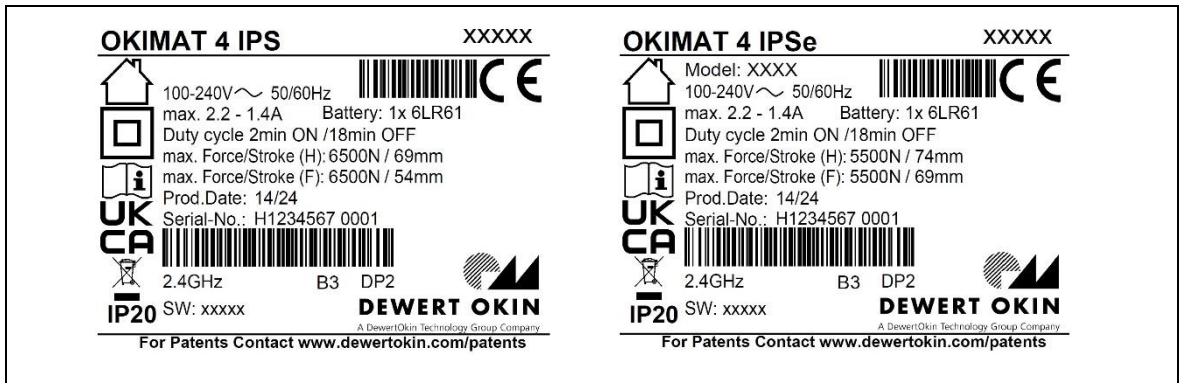


Figure 2 Ratings plates (examples)

OKIMAT 4 IPS OKIMAT 4 IPSe	Product name
Model: XXXX	Model name (optional)
xxxxxx	Article number
100-240V ~	Input voltage
50/60Hz	Frequency
Max. 2.2 - 1.4A	Current consumption
Duty cycle: 2 min ON / 18 min OFF	Intermittent duty / power-on time
Max. force/stroke (H)	Pushing force and stroke (head end)
Max. force/stroke (F)	Pushing force and stroke (foot end)
Prod.date	Calendar week / year
Serial No.	Serial number for your drive
SW: xxxxx	Software number (optional)
2.4GHz	Radio frequency 2.4 GHz (optional)
DP2	Radio protocol DP2 (optional)
B3	Internal SMPS type B3
IP20	Protection degree
	For indoor use only
	Protection class: II
	Operating instructions
	Follow all special disposal instructions!
	Conformity mark
	Conformity mark

OKIMAT 4

2.4 OKIMAT4 (EPS / EPSe) ratings plate

- ▶ The ratings plates shown are examples; the specifications for your drive may differ from this illustration.

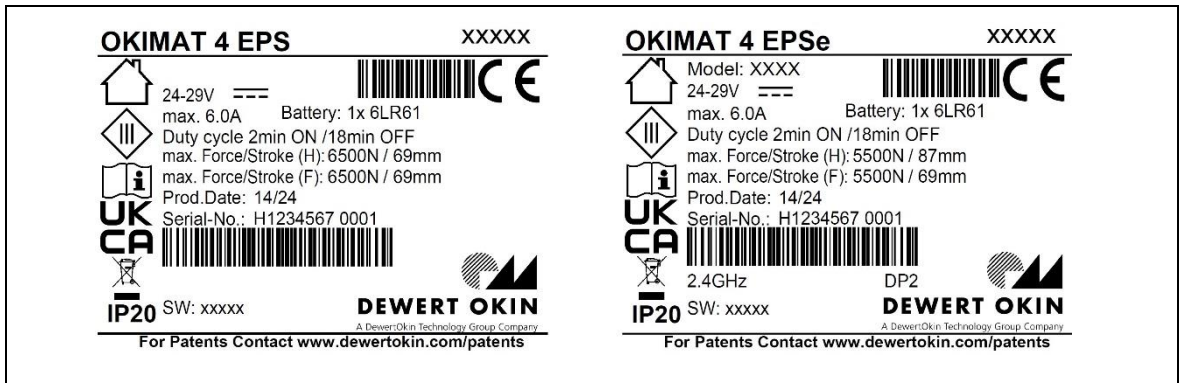


Figure 3 Ratings plates (examples)

OKIMAT 4 EPS OKIMAT 4 EPSe	Product name
Model: XXXX	Model name (optional)
xxxxxx	Article number
24 – 29V	Input voltage
Max. 6.0A	Current consumption
Duty cycle: 2 min ON / 18 min OFF	Intermittent duty / power-on time
Max. force/stroke (H)	Pushing force and stroke (head end)
Max. force/stroke (F)	Pushing force and stroke (foot end)
Prod.date	Calendar week / year
Serial No.	Serial number for your drive
SW: xxxxx	Software number (optional)
2.4GHz	Radio frequency 2.4 GHz (optional)
DP2	Radio protocol DP2 (optional)
IP20	Protection degree
	For indoor use only
	Protection class: III
	Operating instructions
	Follow all special disposal instructions!
	Conformity mark
	Conformity mark

OKIMAT 4

2.5 OKIMAT4 (SL) ratings plate

- ▶ The ratings plate shown is an example; the specifications for your drive may differ from this illustration.

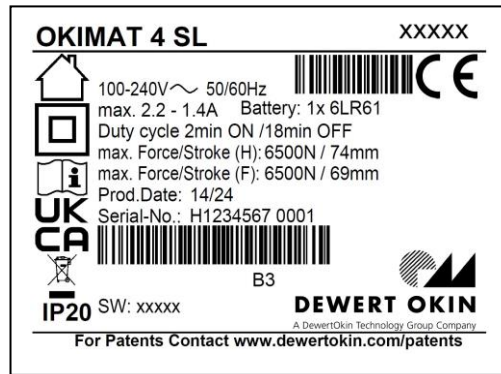








Figure 4 Ratings plate (example)

OKIMAT 4 SL	Product name
xxxxxx	Article number
100-240V ~	Input voltage
50/60Hz	Frequency
Max. 2.2 - 1.4A	Current consumption
Duty cycle: 2 min ON / 18 min OFF	Intermittent duty / power-on time
Max. force/stroke (H)	Pushing force and stroke (head end)
Max. force/stroke (F)	Pushing force and stroke (foot end)
Prod.date	Calendar week / year
Serial No.	Serial number for your drive
SW: xxxxxx	Software number (optional)
B3	Internal SMPS type B3
IP20	Protection degree
	For indoor use only
	Protection class: II
	Operating instructions
	Follow all special disposal instructions!
	Conformity mark
	Conformity mark

3. Possible combinations

The OKIMAT 4 drive can be combined for use with other DewertOkin components. The following basic combinations are possible:

- OKIMAT 4 with cable-bound handset
- OKIMAT 4 with built-in RF wireless receiver and RF hand-held remote control
- OKIMAT 4 with external RF wireless receiver and RF hand-held remote control

Systems can be customized by combining drives and OKIN control units. The system components must be connected in a specific order. The mains plug should only be plugged in after all other components are connected.

DewertOkin has separate system instruction manuals containing all information and instructions needed for these systems.

- ▶ Only a DewertOkin device should be used to control the drive since they have already been verified to work together.

4. Description

The drive is powered by electrical motors. The back and leg sections of a bed can be adjusted depending on the drive options. The drive is controlled by means of a DEWERTOKIN control unit.

The drives differ in their:

- motor power,
- optional reset function,
- different stroke variants,
- optional built-in RF radio receiver,
- country-specific mains power cable and plug,
- optional main power cut-off mechanism (SL),
- optional variant with an external switched-mode power supply (EPS / EPSe).

4.1 Components

The components have a compact design – with two linear adjusting units and a control unit located within an enclosed housing. To facilitate the tool-free assembly process, the two sliders on the side (the shutters) can be removed from the housing.



CAUTION

Risk of accident

Please follow these operating instructions carefully. You could be injured by fire or electrical shock if you do not follow these assembly instructions.

The appropriate pluggable power supply cord is included, depending on the regional version (USA, continental Europe EURO flat plug, the UK, Australia or Japan).

NOTICE

Only use the proper power cable that is permitted in your country. Be sure to use the correct plug adapter, as shown in the following illustration. Follow the specifications on the ratings plate.

- ▶ There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.



CAUTION

Risk of accident

Electrical components should be connected or disconnected only when the power supply cord is unplugged.

4.1.1 Option: Built-in switched-mode power supply (IPS / IPSe) with pluggable power supply cord

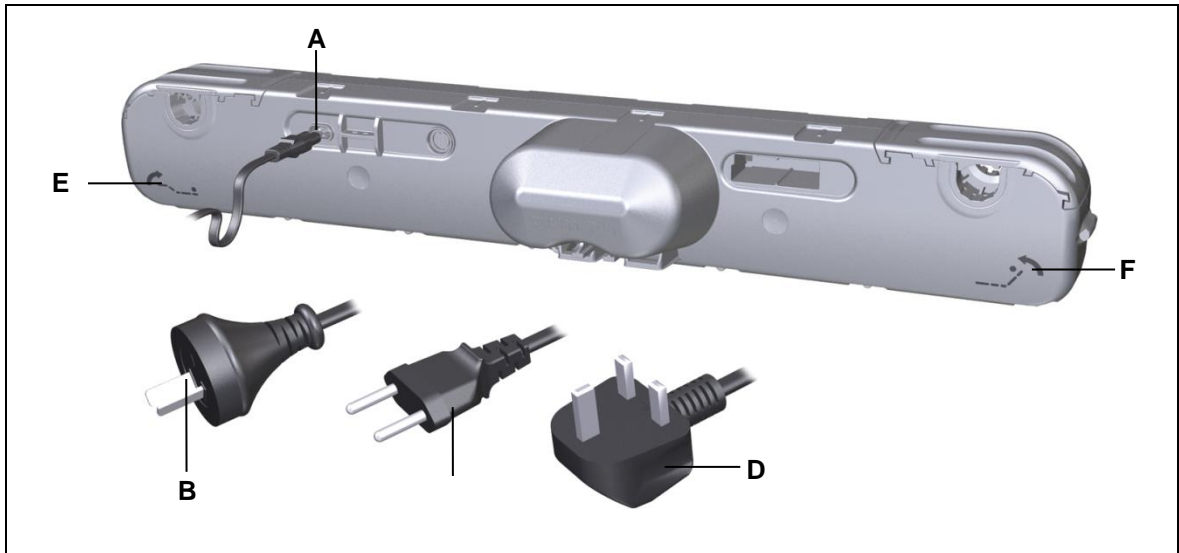


Figure 4 Pluggable power supply cord

- | | |
|---------------------------------|--------------------------------------|
| A Power socket (C8) | B Power plug (Australia) |
| C Power plug (EURO flat) | D Power plug (United Kingdom) |
| E Foot side | F Head side |

4.1.2 Option: Built-in switched-mode power supply with pluggable power supply cord with main power cut-off or MPC (SL)

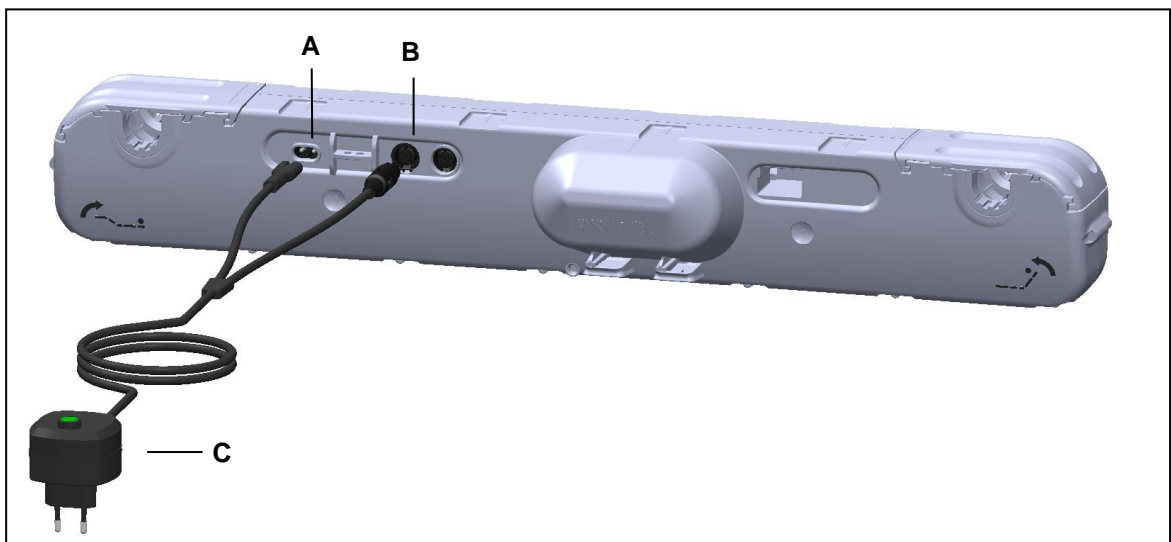


Figure 5 Pluggable power supply cord with main power cut-off (MPC)

- | | |
|------------------------------------------|----------------------------------------|
| A Power socket (C8) | B Socket for the MPC (DIN 5pin) |
| C Power plug with MPC (EURO flat) | |

4.1.3 Option: External switched-mode power supply (EPS / EPSe)

A port on the OKIMAT 4 EPS / EPSe permits the corresponding power supply to be connected (e.g. the Power Supply PD12/PD13).

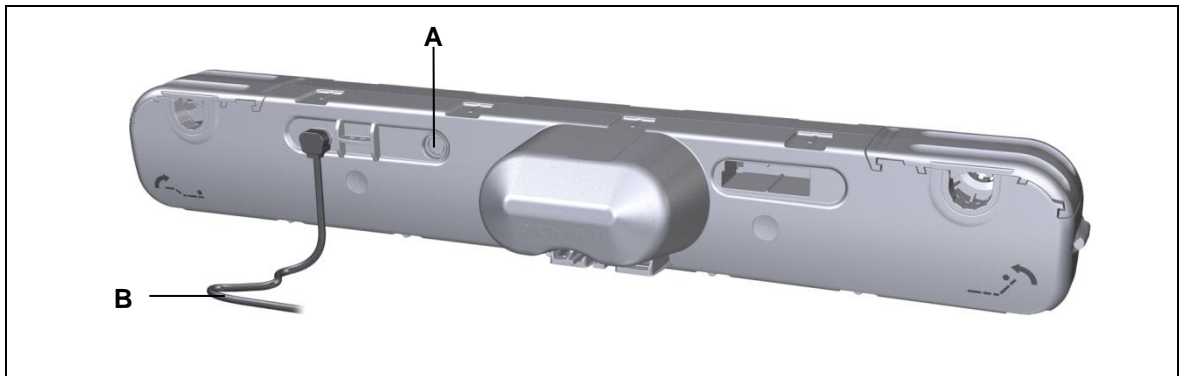


Figure 6 External switched-mode power supply

A Handset socket

B Connecting cable for the power supply (e.g. Power Supply PD12/PD13)

5. Technical specifications

OKIMAT 4 IPS		OKIMAT 4 IPSe
Connection to mains power (AC)	100 - 240 V AC, 50/60 Hz 230 - 240 V AC, 50/60 Hz	
Current	Max. 2.2-1.4 A Max. 1.4 A	
Standby	≤ 0.5 W	
Permitted push force	Max. 6500 N	Max. 5500 N
Adjustment speed	Max. 3.3 mm / second	Max. 4.0 mm / second
Mode of operation ¹ under max. rated load.	Intermittent duty 2 min./18 min.	
Protection class	II	
Wireless frequency (optional)	2.4 GHz band	
Transmitting power (optional)	< 10 mW e.i.r.p	
Drive type	Double drive	
Protection degree	IP20	
Stroke ²	87, 74, 69	
Colours	Black	
Length x width x height (in mm)	720 x 136 (163) x 105	720 x 136 x 105
Axle gap distance	581 mm (+/- 2mm)	
Gap to pivot lever	Min. 480 mm (+ 2mm); refer to Figure 8	
Axle receptacle diameter	Ø 25 mm (optional Ø 34 mm)	Ø 25 mm
Weight	Approx. 3.2 kg	
Optional: battery-operated reset function		
Voltage	One or two nine-volt batteries (type 6LR61) depending on version	
Ambient conditions for operation, storage and transport		
Transport and storage temperature	From -20 °C to +50 °C From -4 °F to +122 °F	
Operating temperature	From +10 °C to +40 °C From +50 °F to +104 °F	
Relative humidity	From 30% to 75%	
Air pressure	From 800 hPa to 1060 hPa	
Height	< 2000 m	

- ¹) Mode of operation: intermittent duty 2 min./18 min. This means that after the unit is operated with its rated load for up to two minutes it must then be paused for 18 minutes. The system can malfunction if this pause is not observed!
- ²) Safety extra low voltage
- ³) Other stroke distances are available on request.

OKIMAT 4

OKIMAT 4 EPS		OKIMAT 4 EPSe
Input voltage (DC)	24 - 29 V	
Current	Max. 6.0 A	
Standby	≤ 0.5 W	
Permitted push force	Max. 6000 N	Max. 4500 N
Adjustment speed	Max. 3.3 mm / second	Max. 4.0 mm / second
Mode of operation ¹ under max. rated load.	Intermittent duty 2 min./18 min.	
Protection class ²	III	
Wireless frequency (optional)	2.4 GHz band	
Transmitting power (optional)	< 10 mW e.i.r.p	
Drive type	Double drive	
Protection degree	IP20	
Stroke ³	87, 74, 69	
Colours	Black	
Length x width x height (in mm)	720 x 136 (163) x 105	720 x 136 x 105
Axle gap distance	581 mm (+/- 2mm)	
Gap to pivot lever	Min. 480 mm (+ 2mm); refer to Figure 8	
Axle receptacle diameter	Ø 25 mm, (optional Ø 34 mm)	Ø 25 mm
Weight	Approx. 3.1 kg	
Optional: battery-operated reset function		
Voltage	One or two nine-volt batteries (type 6LR61) depending on version	
Ambient conditions for operation, storage and transport		
Transport and storage temperatures	From -20 °C to +50 °C From -4 °F to +122 °F	
Operating temperature	From +10 °C to +40 °C From +50 °F to +104 °F	
Relative humidity	From 30% to 75%	
Air pressure	From 800 hPa to 1060 hPa	
Height	< 2000 m	

¹⁾ Mode of operation: intermittent duty 2 min./18 min. This means that after the unit is operated with its rated load for up to two minutes it must then be paused for 18 minutes. The system can malfunction if this pause is not observed!

²⁾ Safety extra low voltage

³⁾ Other stroke distances are available on request.

OKIMAT 4

OKIMAT 4 SL	
Connection to mains power (AC)	100 - 240 V AC, 50/60 Hz
Current	Max. 2.2-1.4 A
Standby	≤ 0.5 W
Permitted push force	Max. 6500 N
Adjustment speed	Max. 3.3 mm / second
Mode of operation ¹ under max. rated load.	Intermittent duty 2 min./18 min.
Protection class ²	II
Drive type	Double drive
Protection degree	IP20
Stroke ³	87, 74, 69
Colours	Black
Length x width x height (in mm)	720 x 136 (163) x 105
Axle gap distance	581 mm (+/- 2mm)
Gap to pivot lever	Min. 480 mm (+ 2mm); refer to Figure 8
Axle receptacle diameter	Ø 25 mm, (optional Ø 34 mm)
Weight	Approx. 3.2 kg
Optional: battery-operated reset function	
Voltage	One or two nine-volt batteries (type 6LR61) depending on version
Ambient conditions for operation, storage and transport	
Transport and storage temperatures	From -20 °C to +50 °C From -4 °F to +122 °F
Operating temperature	From +10 °C to +40 °C From +50 °F to +104 °F
Relative humidity	From 30% to 75%
Air pressure	From 800 hPa to 1060 hPa
Height	< 2000 m

- 1) Mode of operation: intermittent duty 2 min./18 min. This means that after the unit is operated with its rated load for up to two minutes it must then be paused for 18 minutes. The system can malfunction if this pause is not observed!
- 2) Safety extra low voltage
- 3) Other stroke distances are available on request.

Dimensions of housing

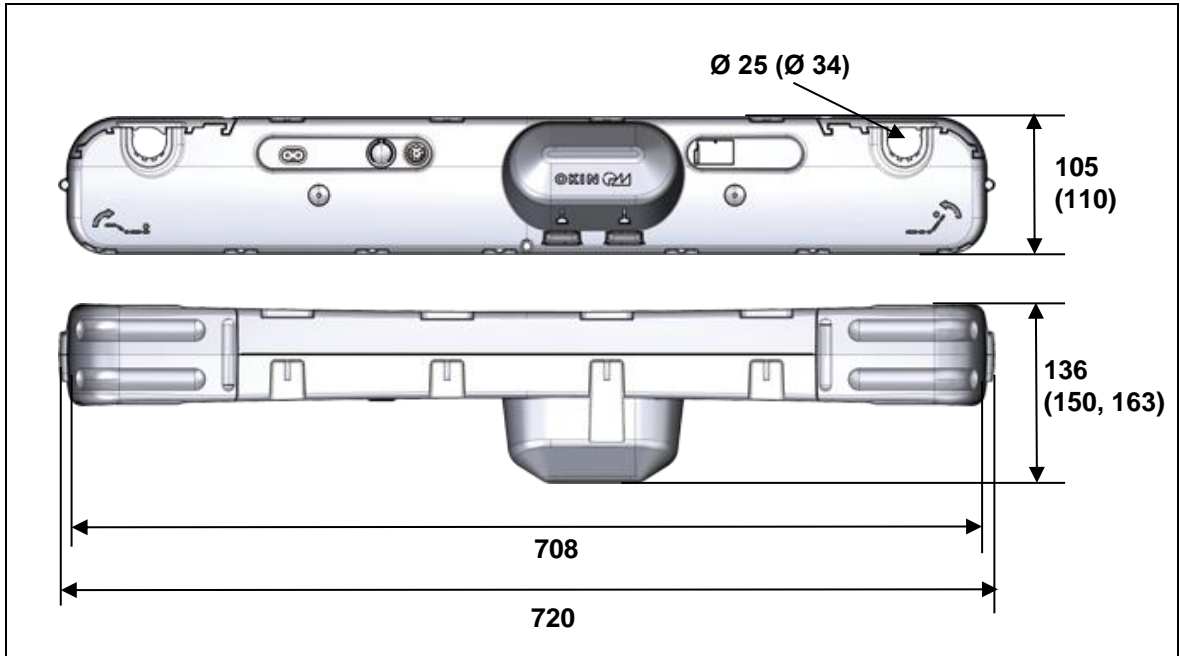


Figure 7 OKIMAT 4 (specified in mm)

Dimensions of the pivot lever

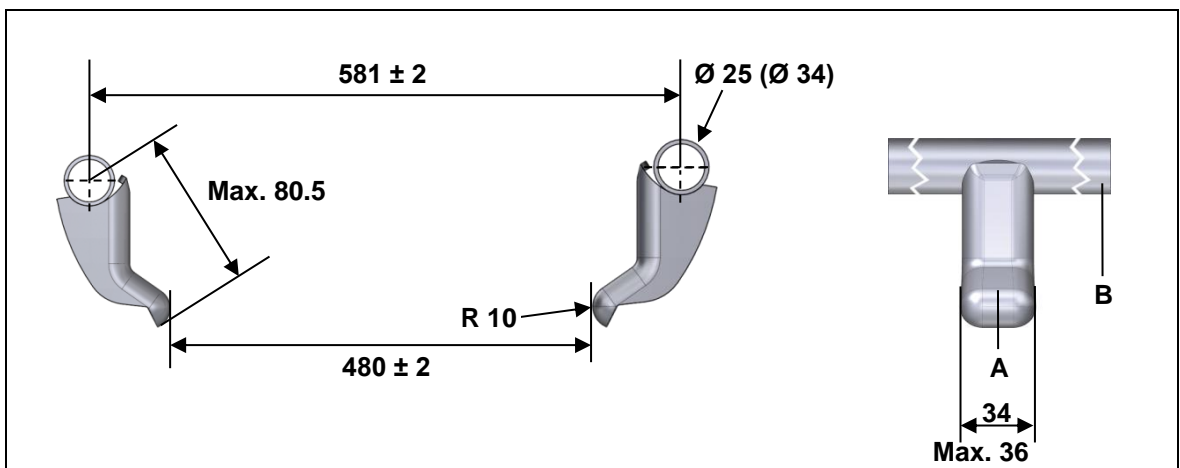


Figure 8 Pivot lever position, in mm

A Pivot lever (OKIN)

B Axle support

- ▶ Make sure that you consider the amount of torque that is generated by the drive when you design the weld between the bracket and the end product.
 - Version 4500 N: Max. torque: 325 Nm.
 - Version 5500 N: Max. torque: 396 Nm.
 - Version 6500 N: Max. torque: 468 Nm.
- ▶ We recommend: the OKIN pivot lever (ID number 2.00.718.108.00)

6. Installation

6.1 Safety notices to observe during installation

Basic safety rules must be followed in order to ensure that the end product can be continually operated in a safe manner. These rules must be observed while using the end product and while installing the drive.

Avoiding fatigue fractures

Drives that are incorrectly installed can undergo fatigue fractures which then create a risk of injury.

- Install the drive in the end product so that it is properly aligned. This will help prevent shear stress.
- Do not position the drive at a slanted angle when installing it in the end product. A slanted angle between the intended direction of movement of the end product and the drive's direction will create shear stress and could lead to a fatigue fracture.

Avoiding a pinching hazard

When designing your product, you should take the drive adjustment movement into account with passive safety mechanisms and with the appropriate safety notices in your operating instructions.

- Installation methods for ensuring passive safety: Install the OKIMAT 4 drive so that none of the positions where shear and pinch hazards exist are accessible externally.


Make sure that your operating instructions inform the user of these safety points.

6.2 Installation procedure

6.2.1 An installation example

Before installing the drive, make sure that you are observing all of the safety notices found in the "Safety notices to observe during installation" section.

- 1 Move your product into a position where it is supporting no load.

 CAUTION
<p>Danger of pinching/crushing injuries!</p> <ul style="list-style-type: none"> • Be sure to carry out work on the drive in a position so that no loads are bearing on it. Only in this way can you be sure to avoid any risks of crushing or injury. • Disconnect the nine-volt battery if you are using the battery-operated reset function.

- 2 Pull the shutters firmly to the side (A). The slots (B) for the brackets (D) are now uncovered.

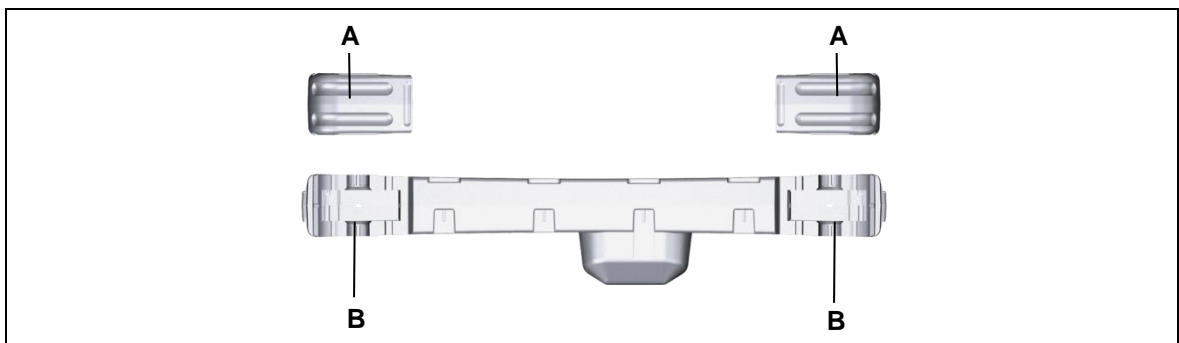


Figure 9 Installing the drive

A Shutters

B Fitting mounts

- 3 Align the OKIMAT 4 next to your product. The slots for the back and leg sides must be properly aligned with the correct brackets on your end product (refer to the symbols on the OKIMAT 4 as described in Figure 4).

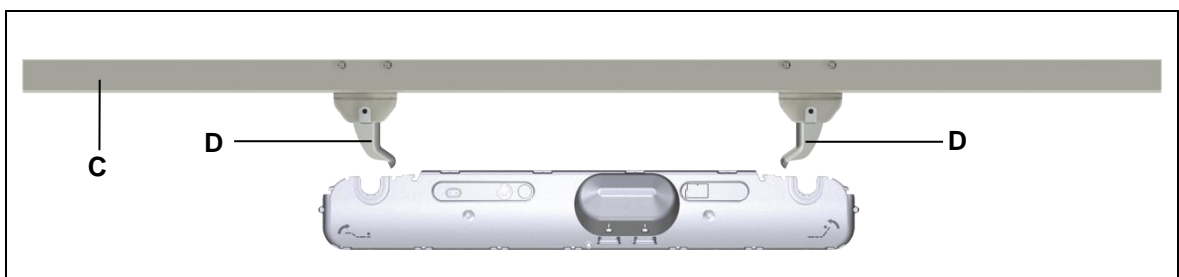


Figure 10 Installing the drive

C End product (bed)

D Brackets with pivot lever

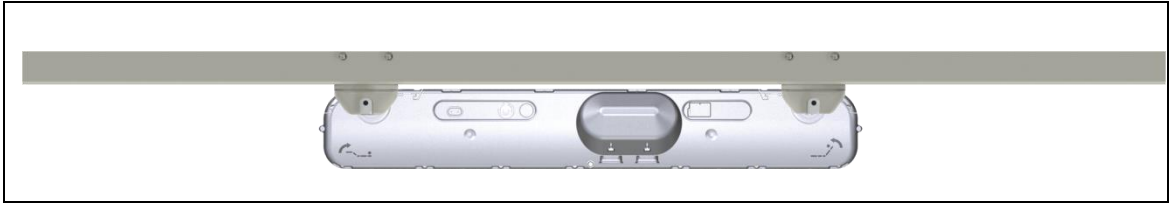


Figure 11 Installing the drive

- 4 Push the drive in so that the brackets (D) fit into the slots (B). Press in until the tubes snap into the brackets.
- 5 Close the shutters (A) on the drive by snapping them back in. The OKIMAT 4 is now securely attached to the end product.
- 6 Disconnect all additional components (handset, etc.) from their sockets.
- 7 Now connect the drive to the power supply.

NOTICE
Use only DewertOkin Manufacturer SELV power supply: PD21; PD22, PD23

Please note, after the power supply has been connected:

- ▶ There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.

6.2.2 Mounting the adapter for the receiver and control unit (optional)

There are optional adapters available for the RF ECO BASIC and RF ECO BT / RF ECO BT M receivers, as well as the HE150 control unit. The receiver and the control unit can be placed in the adapter. The adapter is attached to the OKIMAT 4.

Mounting the adapter for the RF ECO BASIC

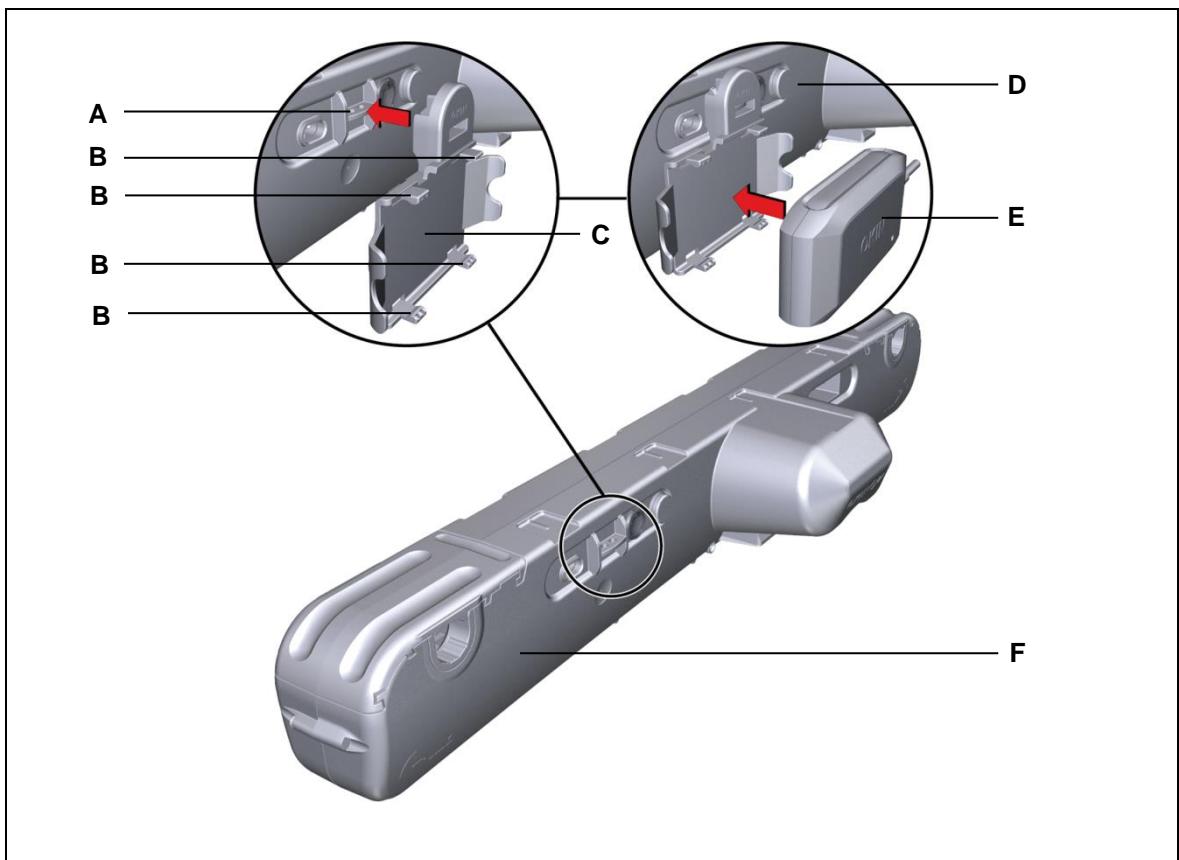


Figure 12 Mounting the adapter for the RF ECO BASIC

- | | |
|------------------------------|-------------------------|
| A Mounting attachment | B Locking clips |
| C Adapter | D Handset socket |
| E RF ECO BASIC | F OKIMAT 4 |

- 1 Push the adapter's locking clip into the OKIMAT 4's mounting attachment until you hear the clip snap in.
- 2 You can put the RF ECO BASIC into the adapter after you have mounted the adapter.
- 3 Connect the plug from the RF ECO BASIC to the handset socket on the OKIMAT 4.

Mounting the adapter for the RF ECO BT / RF ECO BT M

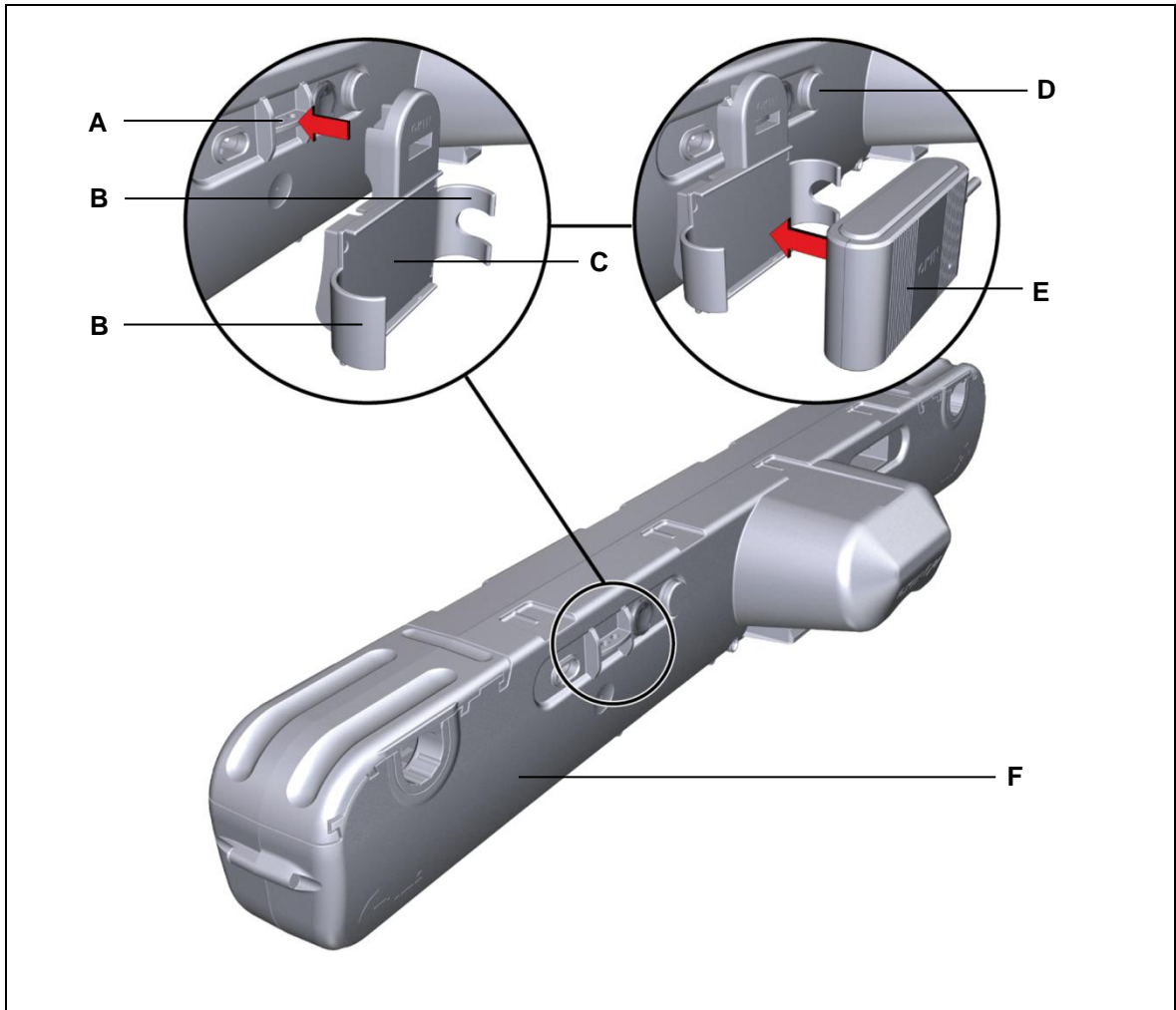


Figure 13 Adapter mount for the RF ECO BT / RF ECO BT M

- | | |
|----------------------------------|------------------------------------------------|
| A Mounting attachment | B Guide for the RF ECO BT / RF ECO BT M |
| C Adapter | D Handset socket |
| E RF ECO BT / RF ECO BT M | F OKIMAT 4 |

- 1 Push the adapter's locking clip into the OKIMAT 4's mounting attachment until you hear the clip snap in.
- 2 You can put the RF ECO BT / RF ECO BT M into the adapter after you have mounted the adapter.
- 3 Connect the plug from the RF ECO BT / RF ECO BT M to the handset socket on the OKIMAT 4.

Mounting the adapter for the HE150 control unit

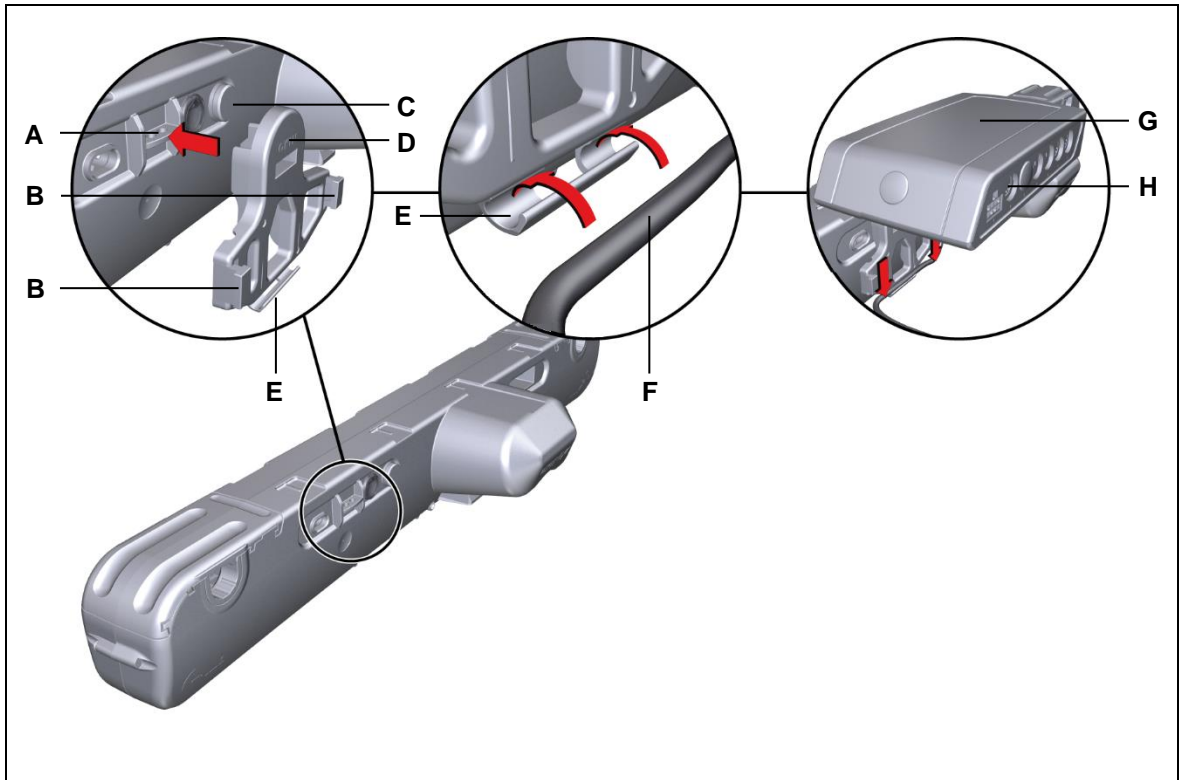


Figure 14 Mounting the adapter for the HE150

- | | |
|----------------------------------------|-----------------------------------------|
| A Mounting attachment | B Guide for the HE150 |
| C Connecting socket in OKIMAT 4 | D Adapter |
| E cable guide | F Connecting cable |
| G HE150 control unit | H Connecting socket of the HE150 |

- 1 Push the adapter's locking clip into the OKIMAT 4's mounting attachment (**A**) until you hear the clip snap in.
- 2 Connect the connecting cable plug to the connecting socket of the OKIMAT 4 (**C**).
- 3 Route the connecting cable (**F**) in the cable guide (**E**) of the adapter.
- 4 Put the HE150 control unit (from the top downwards) into the adapter's guide (**B**).
- 5 Connect the connecting cable plug to the connecting socket on the HE150 (**H**).

Removing the adapter

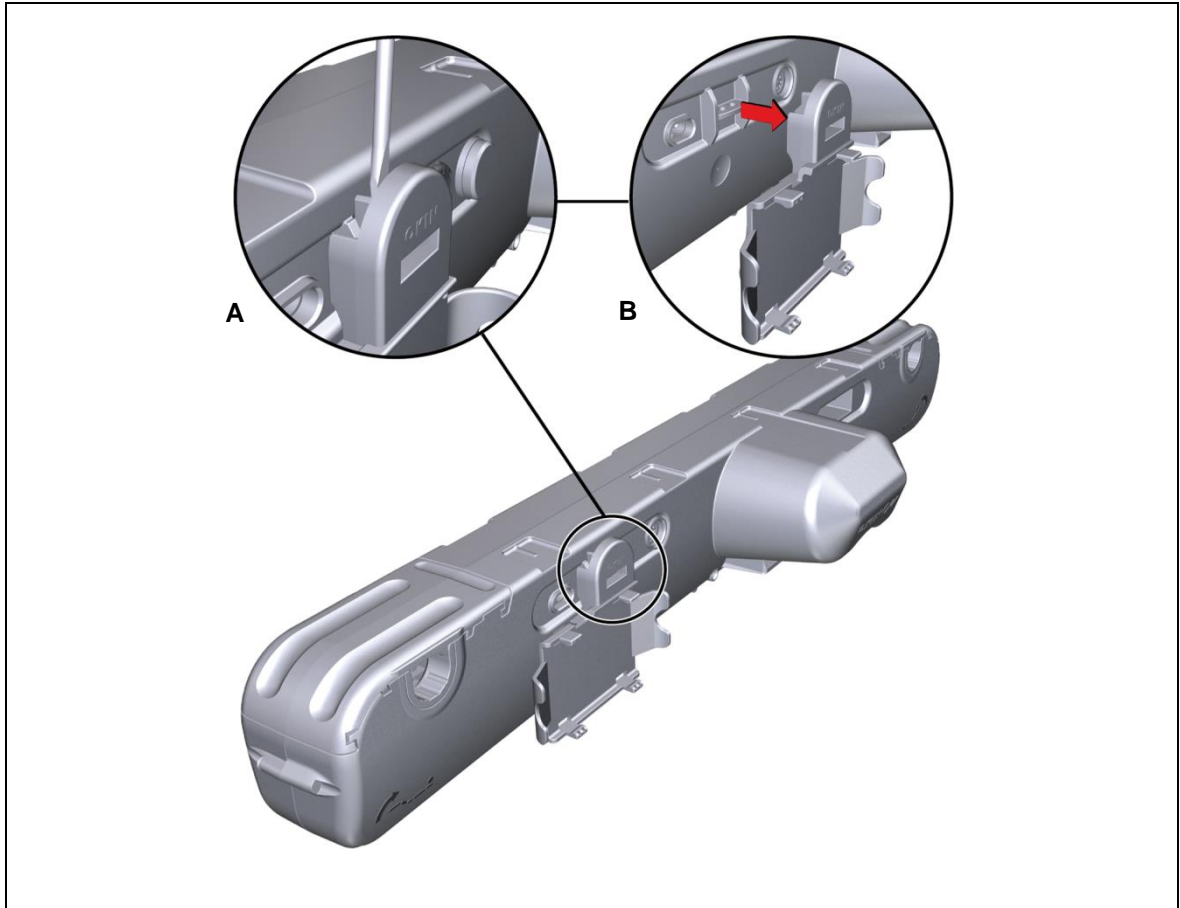


Figure 15 Removing the adapter (an example)

- 1 Disconnect the plug of the receiver or HE150 control unit from the handset socket.
- 2 Take the receiver or control unit (RF ECO BASIC, RF ECO BT / RF ECO BT M, RF-M-BT or HE150) out of its adapter.
- 3 To remove the adapter, use a screwdriver to carefully unlock the locking clip (as shown in Figure A). Then pull out the adapter (B).

Threading the handset cable, power cable and connecting cable into the strain relief mechanism

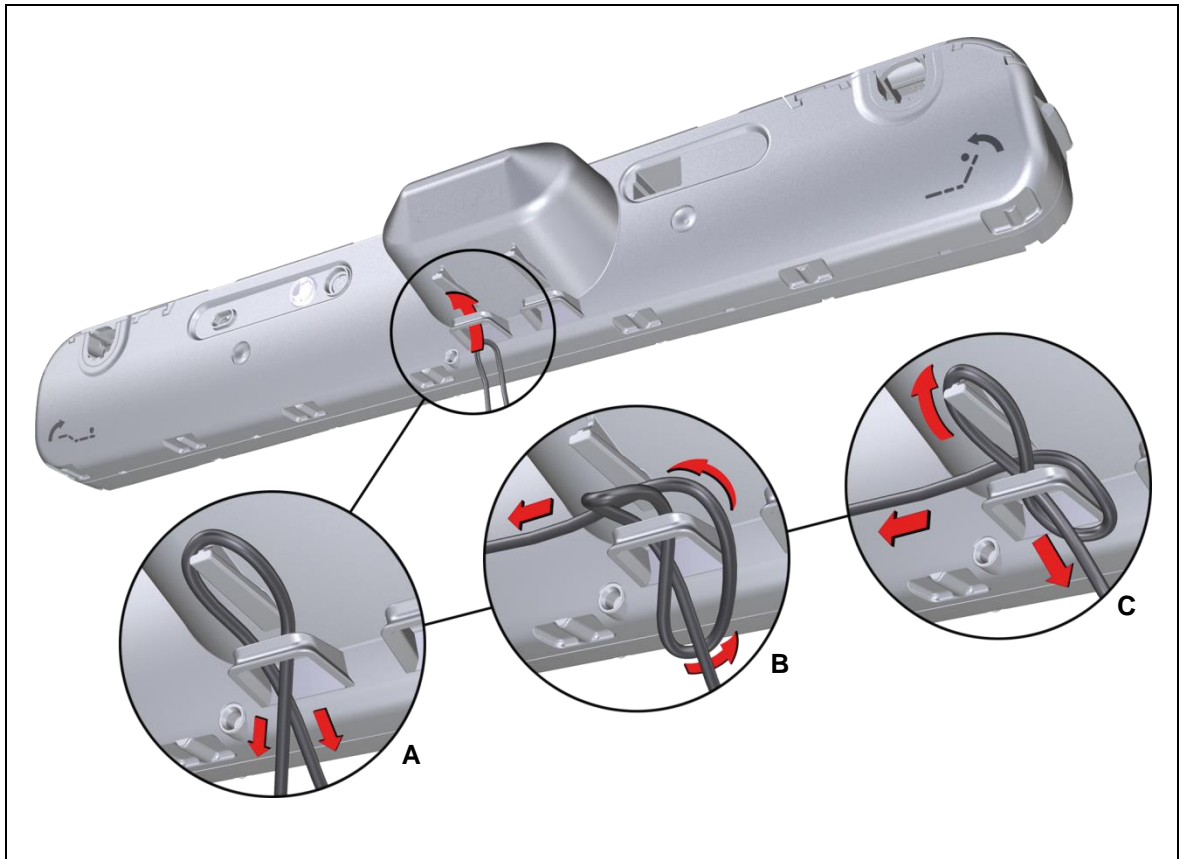


Figure 16 Looping the cable through the strain relief mechanism

A Cross over the looped-in cable

B Guide one cable end back behind the loop

C Secure cable to strain relief




CAUTION

Risk of accident

Electrical components should be connected or disconnected only when the power supply cord is unplugged.

- 1 To attach the handset cable: Connect the plug from the handset to the handset socket on the OKIMAT 4.
- 2 Push the cable in a loop through the strain relief (as shown by **A** in Figure 16).
- 3 Run the right cable strand first under the left strand and then behind and through the loop (as shown by **B** in Figure 16).
- 4 Place the loop over the peg on the drive and pull the loop back slightly (as shown by **C** in Figure 16).
- 5 In order to secure the power cable: Connect the power cable plug to the power socket on the OKIMAT 4. Repeat steps 2 through 4 with the power cable using the second strain relief.

6.2.3 Electrical connection

 CAUTION
Risk of accident Electrical components should be connected or disconnected only when the power supply cord is unplugged.

- ▶ There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.

Option: Pluggable power cable (OKIMAT 4 IPS / IPSe)

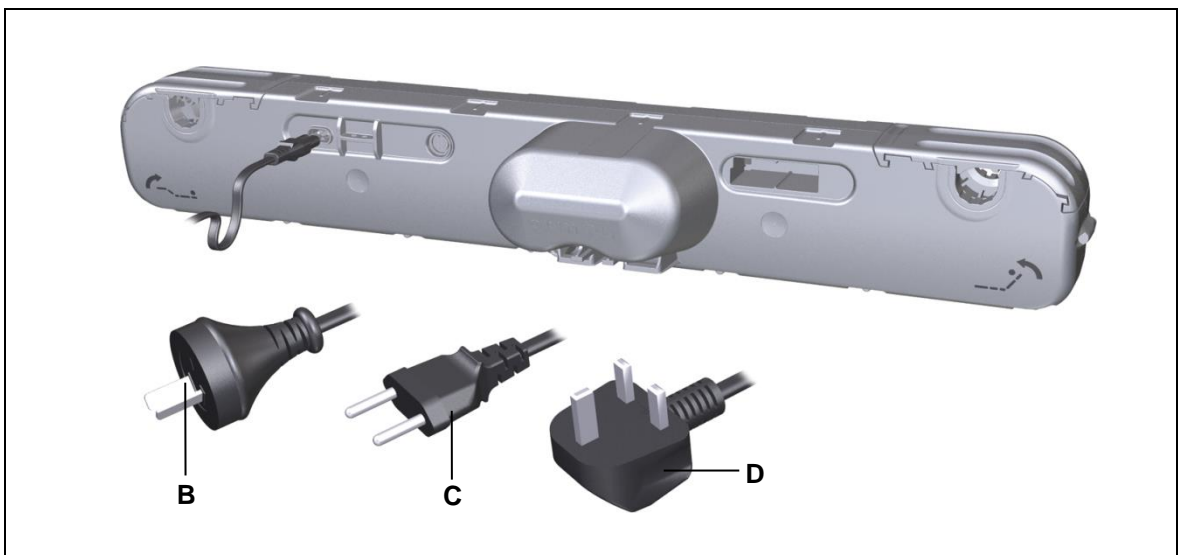


Figure 17 Pluggable power supply cord

B Power plug (Australia)

C Power plug (EURO flat)

D Power plug (United Kingdom)

Option: Pluggable power cable with main power cut-off (OKIMAT 4 SL)

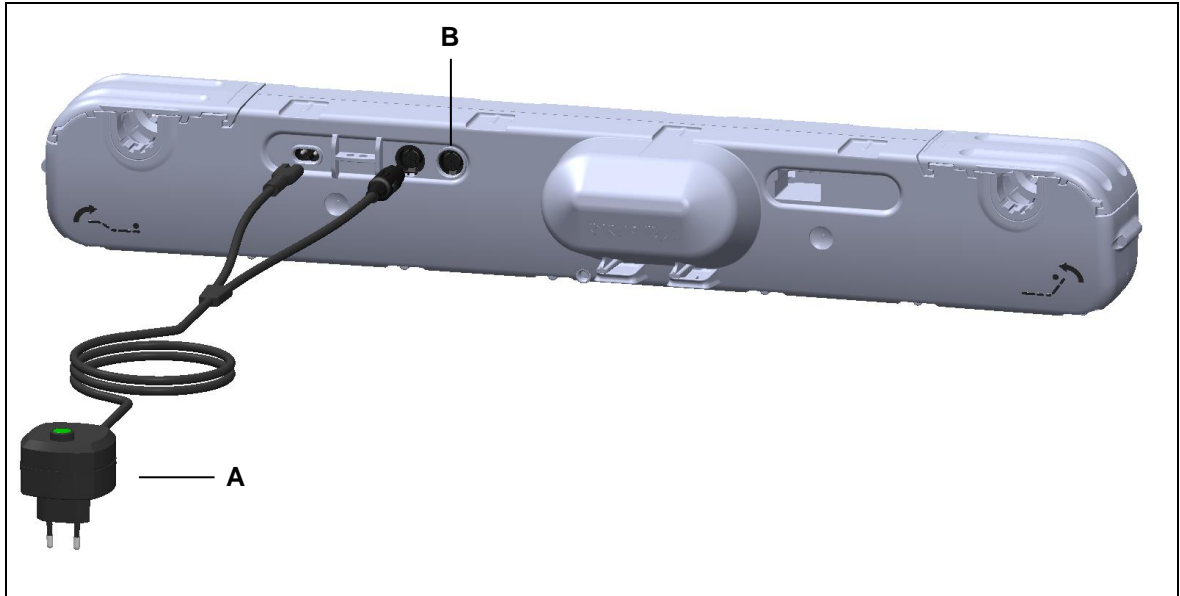


Figure 18 Pluggable power supply cord with main power cut-off

A Power plug with MPC (EURO flat)

B Handset socket

Option: Connecting the OKIMAT 4 EPS / EPSe to an external power supply

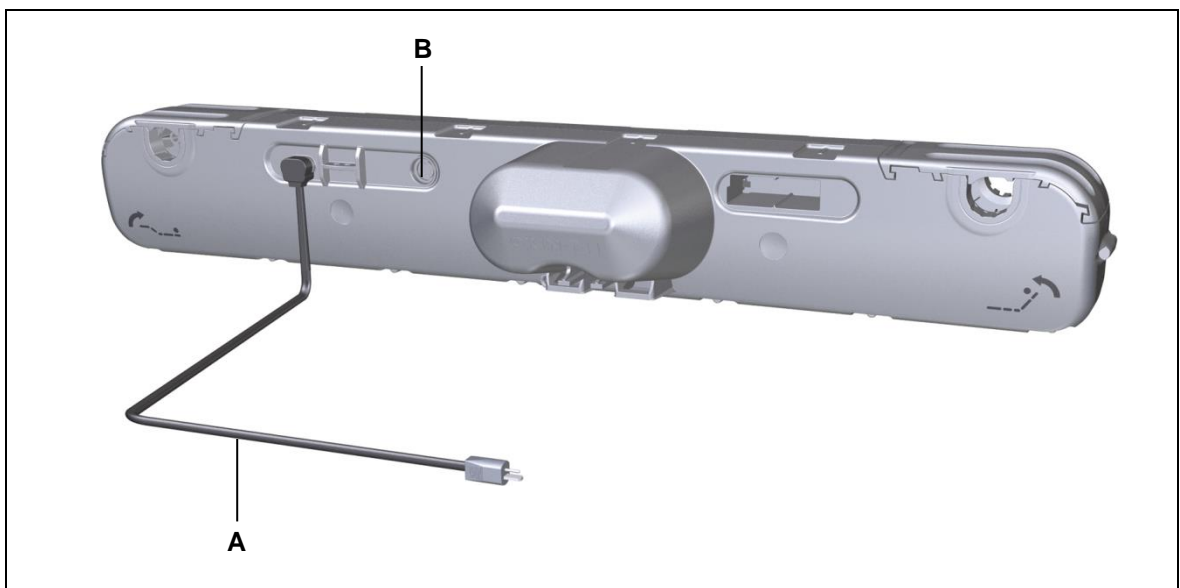


Figure 19 External switched-mode power supply (SMPS)

A Cable for the external power supply

B Handset socket

Optional: battery-operated reset function
Connecting the nine-volt battery

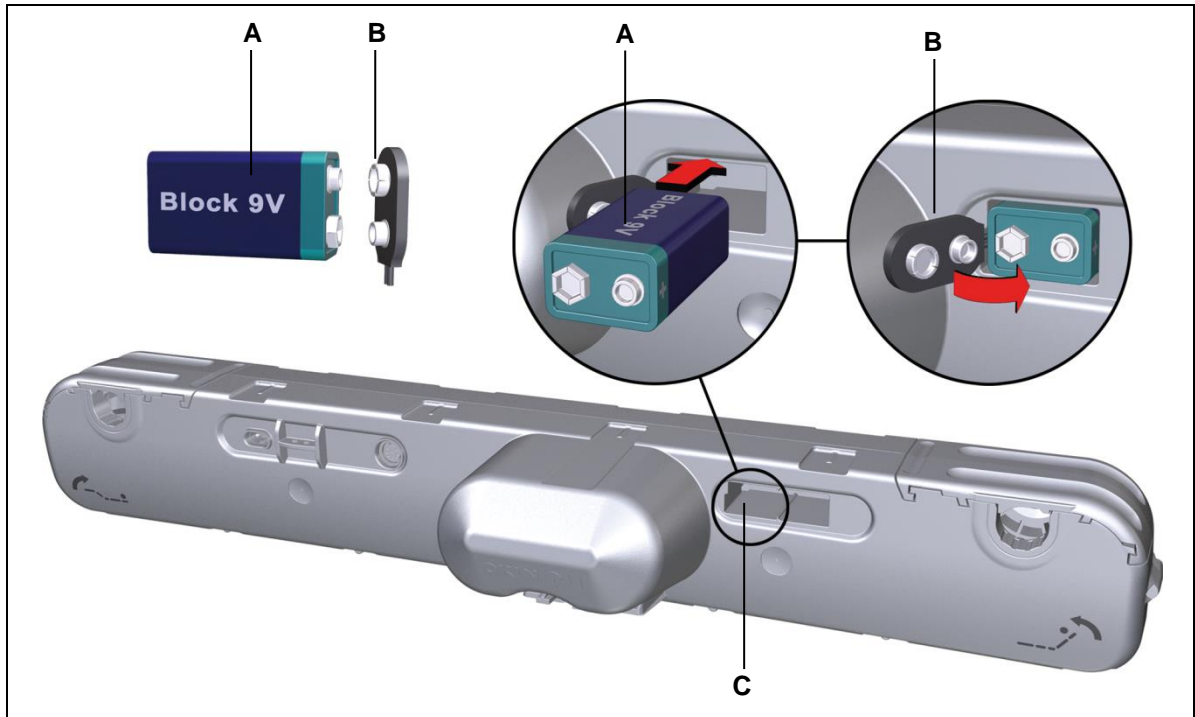


Figure 20 Connecting the nine-volt battery

- A** Nine-volt alkaline battery (type 6LR61) **B** Battery clip
C Battery compartment for 1 or 2 batteries

NOTICE

- For the RF radio variants, the nine-volt battery may discharge whenever the mains voltage is not connected.
- If the appliance is to be stored unused for a long period, the batteries are removed
- Different types of batteries or new and used batteries are not to be mixed (when using two batteries)
- The connector terminals of the battery are not to be short-circuited.
- This appliance contains non-rechargeable batteries, these batteries are not to be recharged
- Do not use rechargeable batteries in place of non-rechargeable, alkaline batteries.

Routing the electrical cables

When routing the cables, be sure that:

- the cables cannot get jammed,
- no mechanical load (such as pulling, pushing or bending) will be put on the cables, and
- the cables cannot be damaged in any way.

Fasten all cables (especially the mains cable) to the end product using sufficient strain relief and kink prevention methods. Be sure that the design of the end product prevents the mains cable from coming into contact with the floor during transport.

6.2.4 Dismantling

! CAUTION
Risk of accident
<ul style="list-style-type: none">• Electrical components should be connected or disconnected only when the power supply cord is unplugged.• Disconnect the nine-volt battery if you are using the battery-operated reset function.

► Certain details may change because of technical changes.

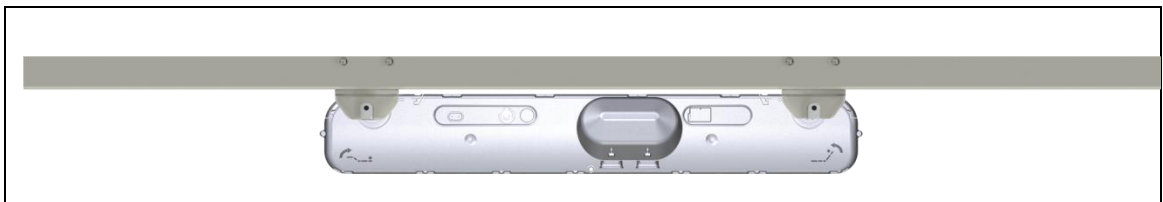


Figure 21 Removing the drive

1 Move your product into a position where it is supporting no load.

! CAUTION
Danger of pinching/crushing injuries!
Be sure to carry out work on the drive in a position so that no loads are bearing on it. Only in this way can you be sure to avoid any risks of crushing or injury.

- 2 Disconnect the OKIMAT 4 from the power supply!
- 3 Disconnect the connecting cables from all additional components (e.g. handsets) from their sockets.
- 4 Be sure to support the drive's weight to prevent it from falling.
- 5 Pull strongly on the shutters (A) sideways until they are completely out.

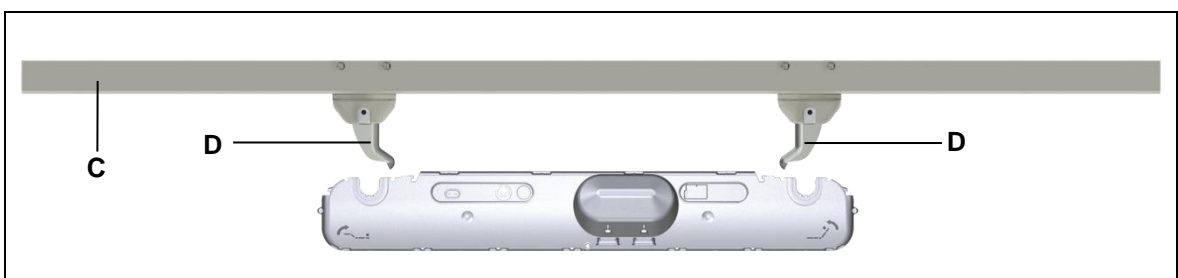


Figure 22 Removing the drive

C End product (bed)

D Brackets

OKIMAT 4

- 6 Pull out the OKIMAT 4 far enough so that the brackets (D) are out of the slots (B). The OKIMAT 4 is now unattached and can be removed.

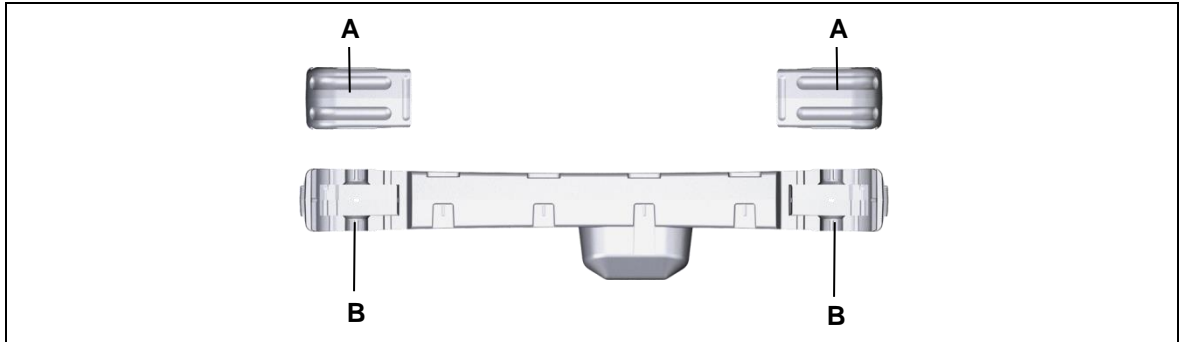


Figure 23 Removing the drive

A Shutters

B Fitting mounts

- 7 Push the shutters (A) back onto the OKIMAT 4 so that they are not lost during transportation.

7. Information about creating your Operating Manual

The factual information contained within may be used when you are creating the end-product manual. The installation instructions do not contain all information required for the safe operation of the end product. They only describe the installation and operation of the drive as a partially assembled piece of machinery.

- ▶ When creating the operating instructions, remember that the installation instructions are intended for qualified specialists and are not for typical users of the end product.

7.1 General information

- ▶ Only a DewertOkin device should be used to control the drive since they have already been verified to work together.

Delayed start-up

After plugging the power plug into the power outlet:

- ▶ There is a delay after the supply voltage is applied before the device actually turns on. Wait at least two seconds before beginning the commissioning.

Power-on time / intermittent operations

The OKIMAT 4 drive has been designed for intermittent operations. Intermittent operation is an operational mode where the drive must pause after a specified maximum period of operation (power-on time). This protects the drive from overheating. Extreme overheating can cause a malfunction.

- ▶ The ratings plate specifies the maximum power-on time and the required pause intervals.

Avoiding toggle operations

You should avoid switching from one direction of travel to the opposite direction without first stopping the motor. Make sure that you pause between motions! A pause (motor stop time) can be activated using the controls.

NOTICE
You should always avoid a quick change (toggling) of directions.

Shutting off the drive

To shut off the drive, first disconnect the system from the power supply and then disconnect the battery. The power supply must always be accessible during operations so that the system can be shut off.

7.2 Handset / hand-held remote control

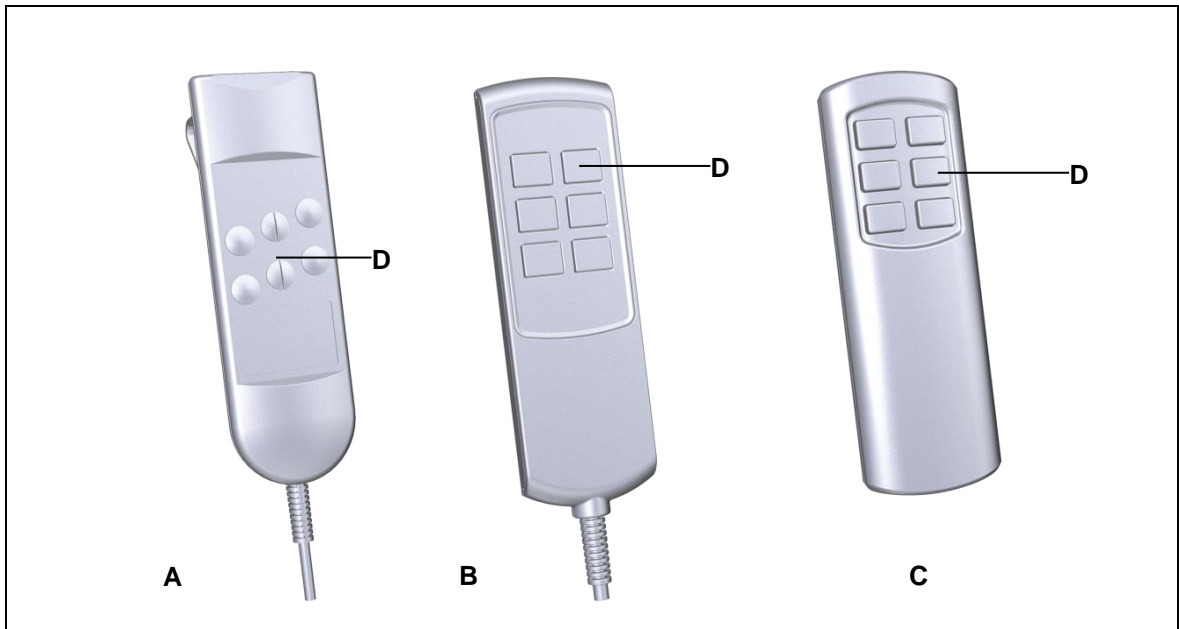


Figure 24 Examples of handset / hand-held remote control

- | | |
|--------------------------------------------------------------------------------------------|--------------------------|
| A Baseline handset | B Topline handset |
| C RF ECO hand-held remote control, for external or internal wireless reception (RF) | D Adjustment keys |

- ▶ The adjustment motions are carried out by pressing on the corresponding symbol keys on the handset/hand-held remote control.

7.2.1 Configuring the RF ECO hand-held remote

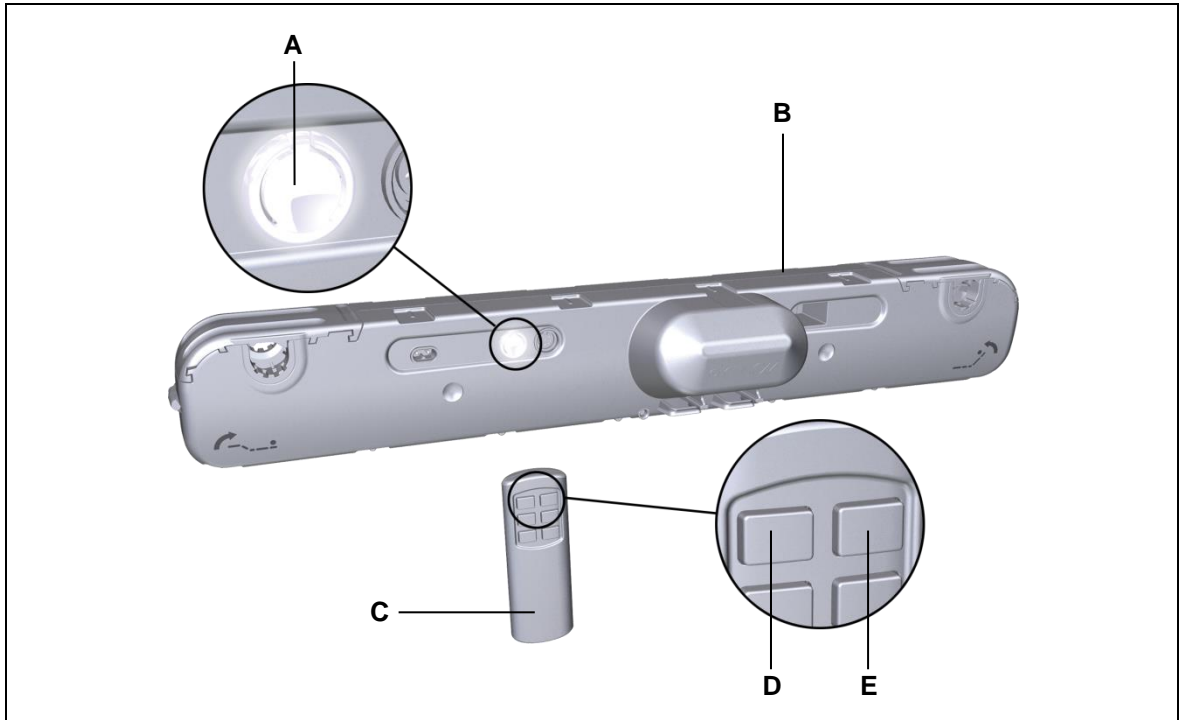


Figure 25 Example: Configuring the RF ECO hand-held remote

A Button

B OKIMAT 4 with built-in RF

C RF ECO hand-held remote

- 1 Press the function key on the drive (**A** in Figure 25) twice (a quick double click). The drive will now be in the teach-in (configuration) mode for approximately 10 seconds. The LED on the function key lights up.
- 2 Press the (**E**) and (**D**) keys simultaneously on the RF ECO hand-held remote. Hold down both keys until the function key's LED starts to blink. The RF ECO remote is now configured and ready to use.

7.2.2 Deactivating the RF ECO hand-held remote

You can interrupt communications between the hand-held remote and the drive; this is useful if you wish to decommission the remote or if the programming for the remote was unsuccessful. Take the following steps:

- 1 Press the function key on the drive (**A** in Figure 25) four times quickly.
- 2 Then press the function key (**A**) one more time. The RF ECO remote is now deactivated.

7.3 Notice for operating with optional configuration

7.3.1 Optional: battery-operated reset function

The battery-operated reset function allows the drive system to be operated during a power outage. One or two nine-volt batteries are used to power the OKIMAT 4 in the event of an outage. The batteries are not connected by default since they have very limited capacity. They can only be used once to power the reset function. The used batteries should then be replaced and properly disposed of.

NOTICE

The battery-operated reset function is not a safety system and does not avert danger.

When working with radio units (RF), first disconnect the drive system from the power supply! Connect the nine-volt battery first when you would like to perform a battery-operated reset. The battery may only be used to power the reset function one time. Take out the battery and dispose of it properly after the reset function has been carried out.

- ▶ If the end product is under a heavy load which prevents the reset function from operating, the strain or load on the end product must first be removed before a reset can be carried out.

7.3.2 Additional operating controls

For more information on operating other controls, refer to the separate instructions for these control units.

7.3.3 Optional: mains cut-off mechanism

For more information on operating other controls, refer to the separate instructions for these controllers.

The mains cut-off mechanism is responsible for isolating the drive automatically from the main power supply when the drive is not moving. A switching component is used to isolate both poles of the power transformer from the main power supply.

The mains cut-off mechanism allows power to the drive only after a button has been pressed on the handset to trigger drive motion.

- ▶ Do not use the integrated mains cut-off if you already use an in-house mains cut-off system.

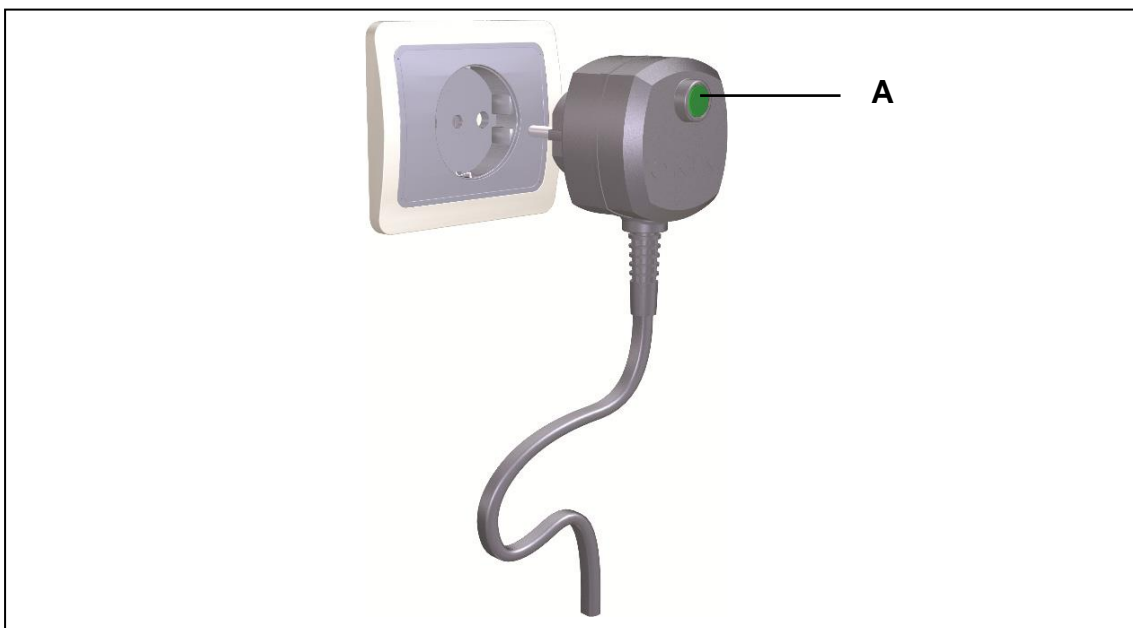


Figure 26 Mains plug with mains cut-off

A Key: Charge switching capacitor

CAUTION

The mains cut-off is not a "central command device" in the sense used by the DIN VDE regulations. You should first completely disconnect the voltage supply from the drive system before conducting any type of work on a DewertOkin product which features a mains cut-off. First pull out the power plug. This guarantees that the system is safely shut off in compliance with the German DIN VDE 0105 and DGUV/regulation 3.

Note on operating the mains cut-off:

- To restore the connection to the mains, press a handset button to adjust the position of the drive.
- If this adjustment motion is not required, insert the mains cut-off plug into the socket. Then press the button on the mains cut-off plug. This charges up a switching capacitor and, when the button is pressed again on the handset, releases the mains connection for the adjustment movement.

8. Troubleshooting

This chapter describes troubleshooting methods for fixing problems. If you experience an error that is not listed in this table, please contact your supplier.

- ▶ Only qualified specialists who have received electrician training should carry out troubleshooting and repairs.

Problem	Possible cause	Solution
The handset or drive system is not functioning.	There is no mains supply voltage.	Connect the mains power.
	The hand switch or drive system is defective.	Please contact your supplier or sales agent.
The drive is suddenly not capable of movement.	The overheating protection or system protection has been triggered.	Remove the overload (change or remove the load). Allow the system to rest for 20 to 30 minutes with the mains power unplugged. If this does not resolve the problem, contact your supplier or distributor.
	The unit's fuse may have been triggered or may be broken.	Please contact your supplier or sales agent.
	There is no mains supply voltage.	Connect the mains power.
	A lead-in connection has been interrupted (mains power, hand switch or auxiliary drive).	Check the cables and reinsert them, if required.
The battery-operated reset is not functioning.	The battery is empty.	Check the battery and replace if necessary.
	Battery is not connected.	Connect the battery.

9. Maintenance

9.1 Maintenance

- ▶ The OKIMAT 4 drive requires no maintenance.

9.2 Cleaning and care

- ▶ Clean the OKIMAT 4 drive as needed using a dry anti-static cloth.

<i>NOTICE</i>
<ul style="list-style-type: none">• Always disconnect the power supply before you start to clean the drive system!• Disconnect the nine-volt battery if you are using the battery-operated reset function.• Never clean the OKIMAT 4 in an automated washing system or with a high-pressure cleaner. Do not allow fluids to penetrate the unit. Damage to the system could result.• Do not use a cleanser that contains benzene, alcohol or similar solvents.• Make sure that you do not damage the drive's connecting cable.

10. Disposal

10.1 Packaging material

The packaging material should be sorted into recyclable components and then disposed of in accordance with the appropriate national environmental regulations (in Germany according to the recycling law KrWG from 01.06.2012; internationally according to the EU Directive 2008/98/EC (Waste Framework Directive WFD as of 12.12.2008)).

10.2 Drive components

The OKIMAT 4 drive consists of electronic components, cables and metal and plastic parts. You should observe all corresponding national and regional environmental regulations when disposing of the OKIMAT 4 drive.

The disposal of the product is regulated in Germany by Elektro-G, internationally by the EU Directive 2012/19/EC (WEEE), or by any applicable national laws and regulations.



The OKIMAT 4 drive should not be disposed of with normal household waste!

The disposal of the nine-volt batteries is regulated in the EU by Battery Directive 2006/66/EC, in Germany by the BattG battery law of 25.6.2009, and internationally by any applicable national laws and regulations.



The battery should not be disposed of with normal household waste!

Declaration of incorporation/installation

According to Appendix II of the EU Machinery Directive 2006/42/EC

The manufacturer:

DewertOkin Kft.

Szent István krt. 24.

6000 Kecskemét Hungary

declares that the incomplete machines:

**OKIMAT 4 IPS, OKIMAT 4 IPSe
OKIMAT 4 EPS, OKIMAT 4 EPSe
OKIMAT 4 SL**

comply with the following basic requirements of the Machinery Directive (2006/42/EC):

Sections: 1.1.3; 1.3.3; 1.3.4; 1.3.7; 1.5.1; 1.5.2; 1.5.5; 1.5.6; 1.5.7; 1.5.8;
1.5.9; 1.5.10; 1.5.13

You may only operate this machine after you have confirmed that the end product (into which this drive will be installed) complies with the Machinery Directive 2006/42/EC.

On request, the manufacturer is obliged to send the special documentation accompanying the partially completed machinery electronically to the appropriate national institution. The special technical documents corresponding to the machine have been created according to Appendix VII, part B.

For preparation of the technical documentation is authorized:

DewertOkin Kft.

Szent István krt. 24.

6000 Kecskemét

Hungary

Kecskemét, Hungary, the 26 of November, 2024

Christoph Porde
Managing Director

EU Declaration of Conformity

In compliance with Appendix IV of the EU EMC Directive 2014/10/EC

In compliance with Appendix IV of the EU Low Voltage Directive 2014/15/EU

In compliance with Appendix VI of the RoHS Directive 2011/65/EU (incl. Commission delegated Directive (EU) 2015/863)

The manufacturer:

DewertOkin Kft.

Szent István krt. 24.

6000 Kecskemét Hungary

declares that the following products

**OKIMAT 4 IPS, OKIMAT 4 IPSe
OKIMAT 4 EPS, OKIMAT 4 EPSe
OKIMAT 4 SL**

meets the requirements of the following EU directives:

Electromagnetic Compatibility Directive 2014/30/EC

Low Voltage Directive 2014/35/EC

RoHS Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of certain hazardous substances in electrical and electronic equipment

Applied standards:

- EN 60335-1:2012/A11:2014
- EN 55014-1:2006/A1:2009/A2:2011
- EN 55014-2:1997/A1:2001/A2:2008
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 62233:2008

This declaration of conformity is no longer valid if constructional changes are made which significantly change the product (i.e., which influence the technical specifications found in the instructions or the intended use)!

Kecskemét, Hungary, the 26 of November, 2024

Christoph Porde
Managing Director

EU Declaration of Conformity (for 2.4 GHz version)

In compliance with Appendix VI of the RED Directive 2014/53/EU:

In compliance with Appendix VI of the RoHS Directive 2011/65/EU

The manufacturer:

DewertOkin Kft.

Szent István krt. 24.

6000 Kecskemét Hungary

declares that the following products (the 2.4 GHz version thereof)

**OKIMAT 4 IPS, OKIMAT 4 IPSe
OKIMAT 4 EPS, OKIMAT 4 EPSe
OKIMAT 4 SL**

meets the requirements of the following EU directives:

Directive 2014/53 on the harmonization of the laws of the Member States relating to the provision of radio equipment on the market

RoHS Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of certain hazardous substances in electrical and electronic equipment

Applied standards:

- EN 60335-1:2012/A11:2014
- EN 55014-1:2006/A1:2009/A2:2011
- EN 55014-2:1997/A1:2001/A2:2008
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 62233:2008
- EN 50663: 2017
- ETSI EN 300440 V2.1.1
- ETSI EN 301489-1 V1.9.2

This declaration of conformity is no longer valid if constructional changes are made which significantly change the product (i.e., which influence the technical specifications found in the instructions or the intended use)!

Kecskemét, Hungary, the 26 of November, 2024

Christoph Porde
Managing Director

DewertOkin Kft.
Szent István krt. 24.
6000 Kecskemét Hungary
Tel: +36-76/515-600

ID No.: 81425