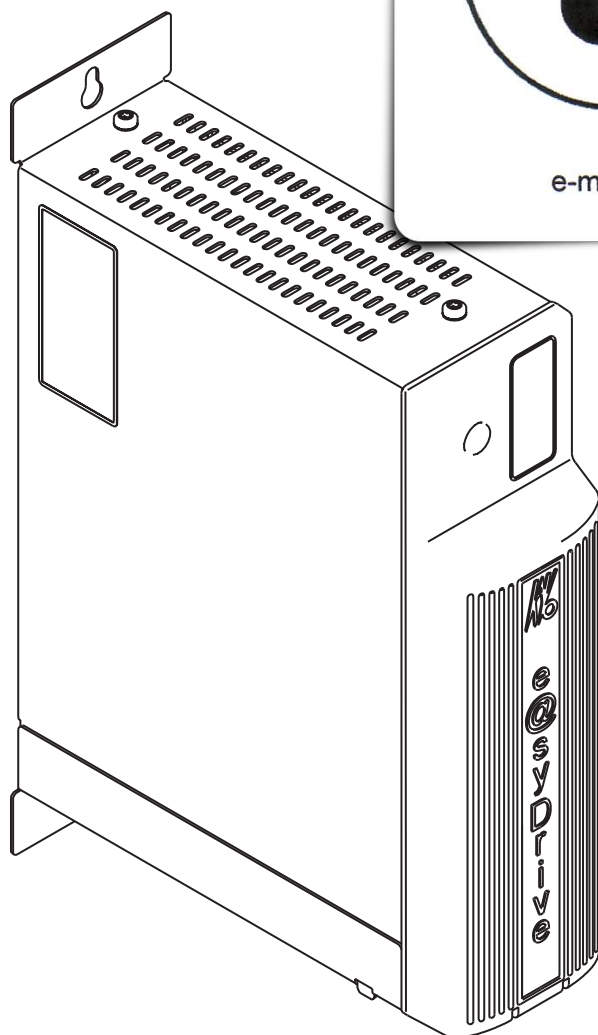




KaVo. Dental Excellence.

Operating Instructions

Power Module 4424-PM, 4425-PM



With Compliments

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A 1 User information

A 1.1 Meaning of the pictograms



Situation which may lead to danger, damage to material or operating faults in the event of failure to follow the instructions.



Important information for operator and engineer.

A 1.2 Important information



The User Manual must be read by the user/operator prior to commissioning, in order to avoid incorrect operation and other damage. If further language versions are required, please request them from your responsible KaVo agent. Duplication and distribution of the User Manual (UM) require prior consent from KaVo.

All technical data, information and properties of the product described in this UM correspond to the state on going to press.

Modifications and improvements to the product on the basis of new technical developments are possible.

This does not imply any right to retrofitting of existing devices.

KaVo cannot be held responsible for damage arising through:

- external influences (poor quality of the media or poor installation)
- use of incorrect information
- improper use
- improperly performed repairs.

Repair and maintenance work - except for the activities described in this User Manual - may be performed only by qualified specialists.

In the event of modifications by third parties, the approvals shall become null and void. KaVo recommends using only original spare parts for operation and for repair.

A 1.3 Precautions

Safe operation and protection of the device is ensured only by proper use, in accordance with the User Manual, with the tools approved for this purpose. The following should also be observed:

- Industrial safety regulations
- Accident prevention regulations

Before installation and commissioning of this device, please read this safety and warning information carefully and observe all warning signs mounted on the device.



- *The power modules 4424 and 4425 supply the inverter types 4424 and 4425 which are controlling dangerously rotating mechanical parts. If these operating instructions are not followed, severe damage to property, injuries and even death may result.*
- *Safe operation of this device depends on the proper installation, handling and operation of the device.*
- *Only appropriately qualified personnel may put this device into operation, maintain it and work on it. Connection, commissioning and rectification of faults may be performed only by specialists.*
- *The device has no mains switch. When working on the open device, it must be completely disconnected from the mains beforehand. The device has no mains input fuses.*
- *The device must only be used for purpose the manufacturer has designed it for. Unauthorized manipulation and connection of other devices the manufacturer has not permitted can cause fire, electrical shock and injury.*
- *After power-off the power module goes into operations automatically.*

Definitions

Danger	In the context of this Operating Instructions and of the warnings mounted on the device, this means that death, serious injury or considerable damage to property may occur if the corresponding precautions are not taken.
Note	In the context of this Operating Instructions, a note constitutes important information which is of particular importance for the understanding and the operation of the device.
Qualified Staff	Is in the meaning of this manual personnel that is familiar with installation, mounting, commissioning and operation of the product and the possible hazard.
Caution	In the context of the Operating Instructions and of the warning signs mounted on the device, this means that slight injury or damage to property may occur if the corresponding precautions are not taken.
Warning	In the context of the Operating Instructions and of the warning signs mounted on the device, this means that death, serious injury and considerable damage to property may occur if the corresponding precautions are not taken.

A 1.4 Purpose and potential applications

The power module 4424 is designed for connection to the inverter type e@syDrive® 4424 only.

The power module 4425 is designed for connection to the inverter type e@syDrive® 4425 only.

(continuous operation)

A 1.5 Technical data

Power Module 4424 (1002.0061)

The Power Module is designed for the supply of inverter type e@syDrive® 4424

Dimensions	75 mm width, 310 mm height, 215 mm depth, for installation in cabinet
Ambient temperature	0 ... 40°C
Humidity	less 90 %, no condensation
Weight	7,2 kg
Standards	VDE tested acc. EN 50178, EMC nach EN 61800-3 Enclosure type IP20 acc. to DIN 40050
Transformer	temperature class B
Electrical supply	single-phase 115/230V~, 50/60 Hz (switchable with voltage selector)
Output power	max. 300 VA (continuous operation)
Output voltage	38 V~
Output current	max. 7,5 A~ (continuous operation)

Power Module 4425 (1001.2770)

The Power Module is designed for the supply of inverter type e@syDrive® 4425

Dimensions	75 mm width, 310 mm height, 215 mm depth, for installation in cabinet
Ambient temperature	0 ... 50°C
Humidity	less 90 %, no condensation
Weight	7,2 kg
Standards	VDE tested acc. EN 50178, UL tested acc. to UL 508C, EMC nach EN 61800-3 Enclosure type IP20 acc. to DIN 40050
Transformer	temperature class B
Electrical supply	single-phase 115/230V~, 50/60 Hz (switchable with voltage selector)
Output power	max. 300 VA (continuous operation)
Output voltage	42 V~
Output current	max. 7 A~ (continuous operation)

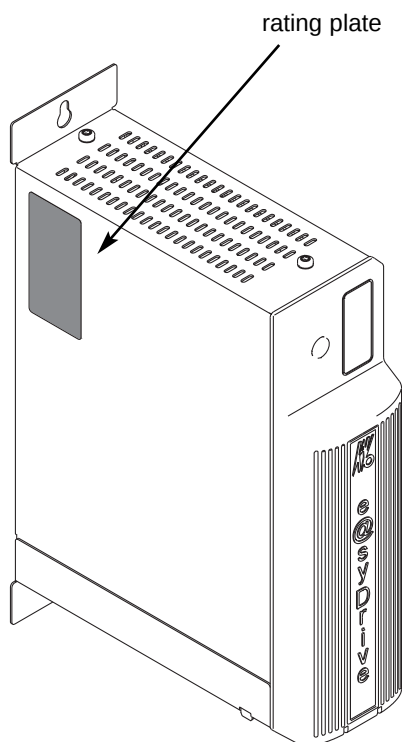
A 2 Scope of delivery

- Power Module type 4424 Mat.-No. 1.002.0061

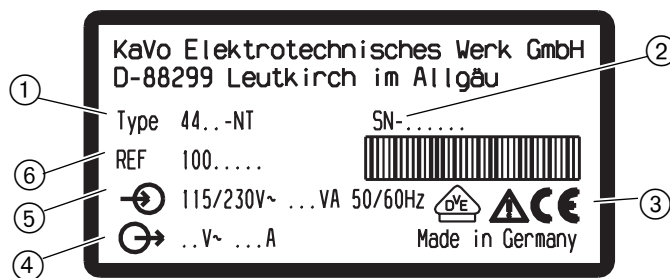
or

- Power Module type 4425 Mat.-No. 1.001.2770

- Instructions for use and assembly Mat.-No. 1.002.0313



A 3 Rating plate



- ① Power Modul Type
- ② Serial number
- ③ Test label
- ④ Power output
- ⑤ Input
- ⑥ Mat. No. (REF)

A 4 Scope of models (standard)

Power Module Types	4424-PM	4425-PM
Enclosure Type (IP20)	REF 1.002.0061	REF 1.001.2770
Input	115/250V AC, 300VA	115/250V AC, 300VA
Power output	38V AC, 7.5A	42V AC, 7A
Matching Inverter Type	4424-D25 (REF 1.001.9109) 4424-D33R (REF 1.001.9110) 4424-D33T (REF 1.002.0752) 4424-A33 (REF 1.001.9291)	4425 (REF 1.001.2768)

B 1 Mounting and Installation

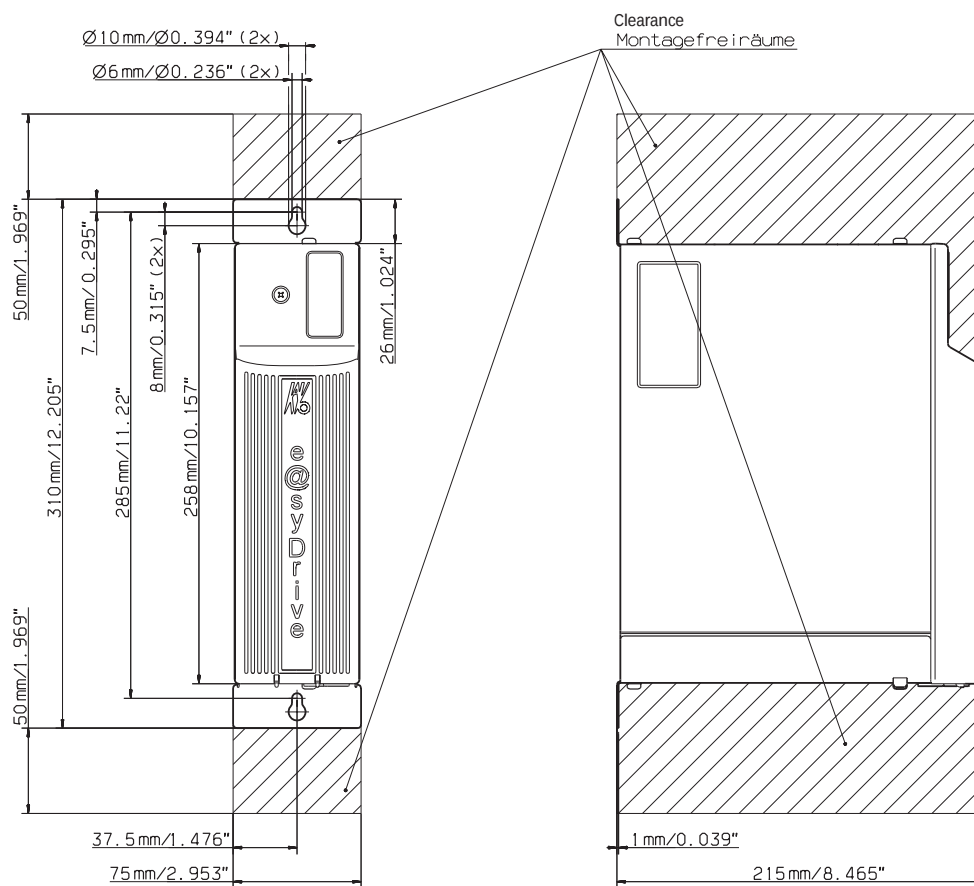
B 1.1 Mounting

- The power modules 4424 and 4425 are designed for mounting in cabinet:
- Use 2 screws for mounting on switch board (M5).
- Ensure proper electrical connection to protective conductor.

Information for cooling



To ensure sufficient cooling of the device keep below shown clearance when mouting!



B 1.2 Electrical installation

 Installation of the Power Module has to comply with valid safety regulations. If no power lead with plug is used an electrical disconnecter must be installed between main supply and power Module. A **16A circuit breaker** with **trip curve B** is to be used.

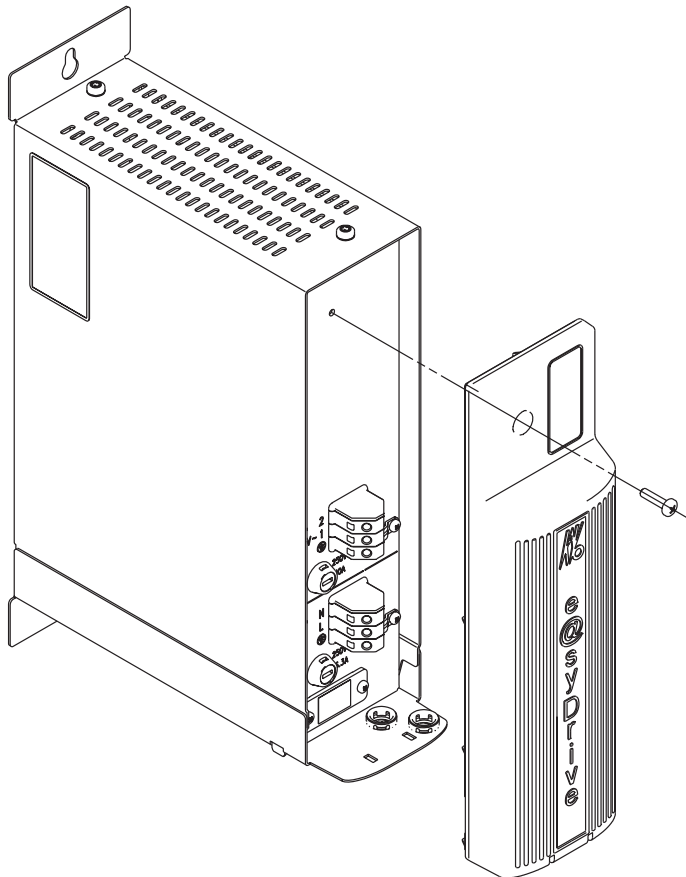
B 1.3 Wiring guidelines to comply with EMC standards

The Power Modules have been tested according to EMC product standard EN 61800-3 (variable-speed drives).

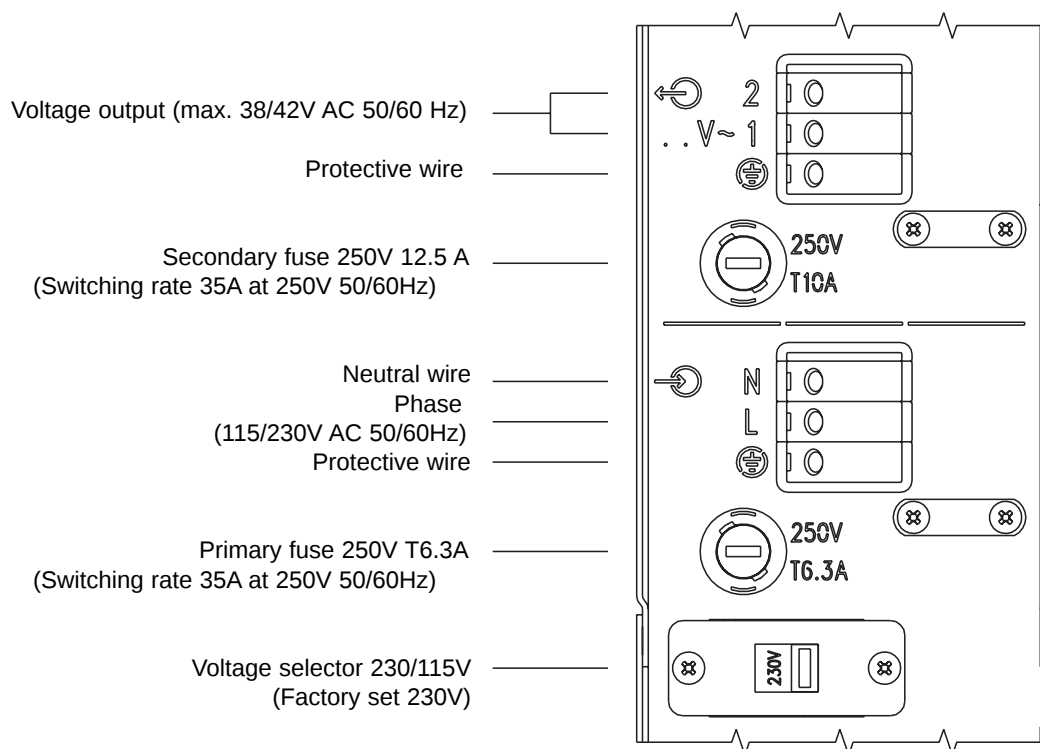


- The above-mentioned EMC product standard can only be kept with use of shielded motor and control cables. It should be ensured that the cable shields rest over a large area of the inverter housing and are surrounded by the cable clips. A shielded mains cable is not required.
- All devices in the mounting cabinet should be connected over a large area to a common earthing point via short earthing cables.
- Under no circumstances valid safety regulations must be ignored when installing the power module.

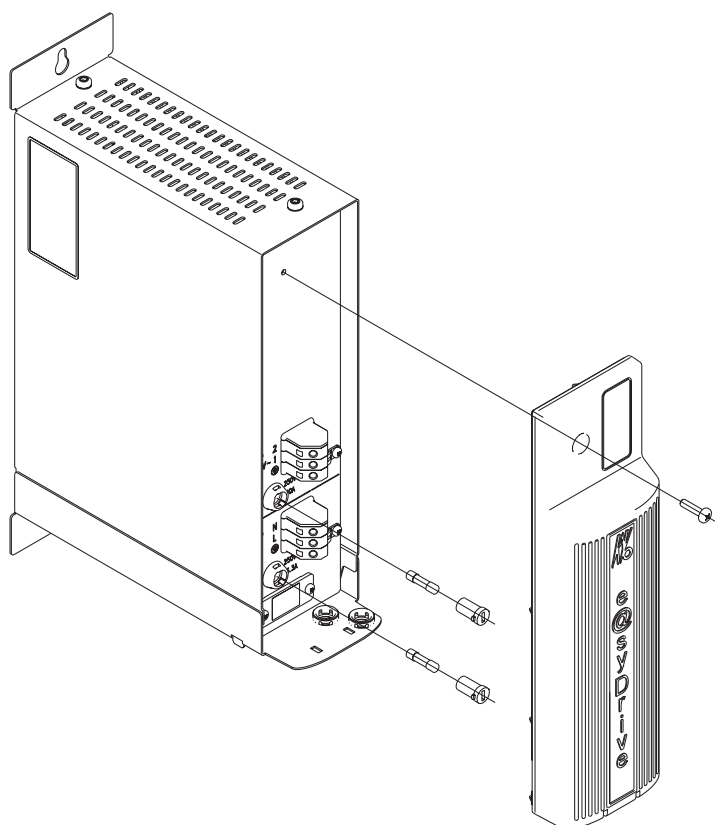
B 1.4 Access to electrical terminals



B 1.5 Electrical connections



B 1.6 Fuse replacement



Konformitätserklärung;**Déclaration de conformité;****CE-Dichiarazione di conformità;****Declaration of conformity;****Declaración de conformidad;**

Wir, We, Nous, Nosotros, Noi,

 KaVo ELEKTROTECHNISCHES WERK GmbH
 Wangener Str. 78
 D-88299 Leutkirch im Allgäu

erklären, dass das Produkt
 declare that the product
 déclarons que le produit
 declaramos que el producto
 dichiariamo che il nostro prodotto

Netzteil Typ EWL 4424, 4425
 Power unit type EWL 4424, 4425

auf das sich diese Erklärung bezieht, mit den wesentlichen Schutzanforderungen gemäß den Bestimmungen der Richtlinie(n) übereinstimmt.
 to which this declaration relates conforms to the essential safety requirements according to the provisions of Directive(s)
 auquel se réfère cette déclaration, est conforme aux exigences essentielles de protection conformément aux dispositions de la/ des Directive(s)
 al lo cual se refiere esta declaración, coincide con las esenciales exigencias de protección según las determinaciones de la(s) norma(s)
 a cui si fa riferimento in questa dichiarazione, è conforme alle misure di sicurezza secondo le direttive delle norm

89/336/EWG (EMV-Richtlinie)
 73/23/EWG (Niederspannungsrichtlinien)

Zur Beurteilung des Erzeugnisses wurden folgende Normen oder normativen Dokumente angewandt:
 The following standards or normative documents were used for assessing the product:
 Les normes ou autres documents normatifs suivants sont utilisés pour le jugement de ce produit :
 Para la evaluación del producto se aplicaron las siguientes normas o documentos norma:
 Per la valutazione del prodotto sono state applicate le seguenti normative o altri documenti normat:

EN 50178 Ausrüstung von Starkstromanlagen mit elektronischen Betriebsmitteln
 EN 61800-3 Drehzahlveränderbare, elektrische Antriebe

Leutkirch, 25.10.2002

M.Mohr
 -Managing Director-

