


USING THE QUICK GUIDE

- Provides information on handling, assembly and installation.
 - Remains for later use at the product.
 - Does **not** replace the electronically provided instructions for use.
- This manual is intended exclusively for persons who are familiar with the logistics and installation. The person must have the following qualifications:
- Knowledge and understanding of the safety instructions.
 - Skills for installation and assembly.
 - Knowledge of EMC conform wiring.
 - Detection of hazards and risks of the electrical drive technology.
 - Knowledge of *DIN IEC 60364-5-54*.
 - Knowledge of national safety regulations (e.g. *DGUV Regulation 3*).


SAFETY INSTRUCTIONS



Interventions by unauthorised personnel!

Danger to life through electric shock and malfunctions!

- Modification or repair is only permitted by KEB authorised personnel.




Getting more documentation

Hazards and risks through ignorance

- Open the KEB homepage at www.keb.de.
- By entering the material number in the search field, you will get the corresponding parts of the instructions for use.
- Read the instructions for use carefully!
- Observe the safety and warning instructions!
- If you have any questions, please contact service@keb.de!

TRANSPORT


The transport must be carried out by instructed persons, observing the following instructions.



Maximum design edges and high weight!

Contusions and bruises!

- Never stand under suspended loads.
- Wear safety shoes.
- Secure devices accordingly when using lifting gear.



Behaviour in case of transport damage

- When receiving goods, check the device for transport damage such as deformations or loose parts.
- In case of damage, contact the carrier immediately.
- Do not operate the device in case of transport damage!

STORAGE

- Do not store the devices
- in the environment of aggressive and/or conductive liquids or gases.
 - at places with direct sunlight.
 - outside the specified environmental conditions.

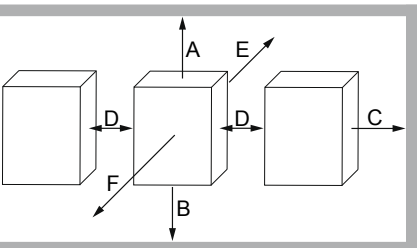
UNPACKING AND CHECKING

- Make sure that no components are bent and/or isolation distances are changed.
- The device must not be put into operation in case of mechanical defects. There is no compliance with applicable safety standards any more.

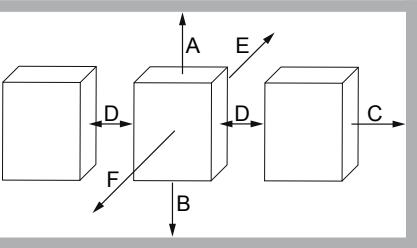
INSTALLATION

- If available, use the lifting eyebolts provided for installation.
- Do not stand under suspended equipment during installation.
- Mount the product according to the required degree of protection.
- Make sure that no small parts fall into the device during assembly and wiring (drilling chips, screws etc.). This also applies to mechanical components, which can lose small parts during operation.
- The devices are intended for the use in a pollution degree 2 environment.
- Maximum ambient temperature 45°C
- UL/CSA: Ensure UL-compliant connection of all power connections according to the requirements given in the data sheet.

MOUNTING DIMENSION 07...12Z2F04-1003

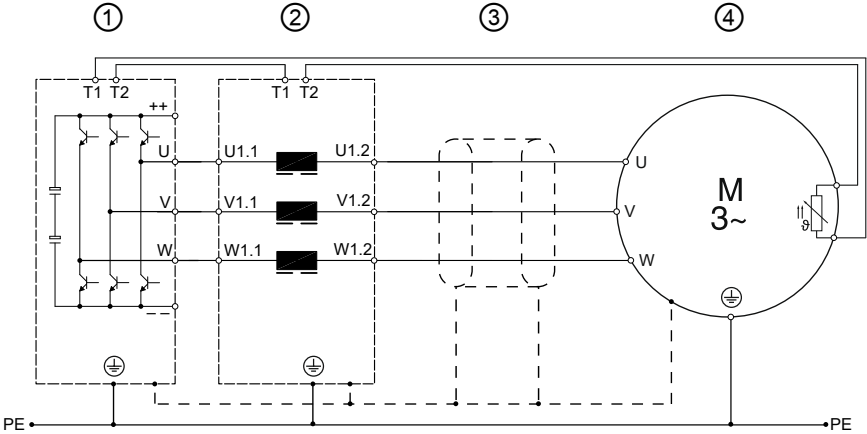
| Minimum distances | | Dimension | Dimension in mm | Distance in inches |
|---|--|---|-----------------|--------------------|
|  | | A | 150 | 6 |
| | | B | 150 | 6 |
| | | C | 150 | 6 |
| | | D | 150 | 6 |
| | | E | 0 | 0 |
| | | F ¹⁾ | 150 | 6 |
| | | ¹⁾ Distance to front operating elements in the control cabinet door. | | |

MOUNTING DIMENSION 13...30Z2F04-1003


| Minimum distances | | Dimension | Dimension in mm | Distance in inches |
|---|--|---|-----------------|--------------------|
|  | | A | 100 | 4 |
| | | B | 0 | 0 |
| | | C | 100 | 4 |
| | | D | 100 | 4 |
| | | E | 100 | 4 |
| | | F ¹⁾ | 100 | 4 |
| | | ¹⁾ Distance to front operating elements in the control cabinet door. | | |

WIRING

Schematic diagram with motor choke



| | | | | | |
|--------|-----------------------------|------------------|--|------------------|-----------------------------------|
| 1 | Drive controller | 3 | Shielded motor cable | T1, T2 | Connection temperature monitoring |
| 2 | Motor choke | 4 | Motor | U, V, W | Output drive controller |
| ++, -- | DC link connection | U1.1, V1.1, W1.1 | Input motor choke | U1.2, V1.2, W1.2 | Output motor choke |
| PE / ⊕ | Connection protective earth | --- | Functional potential equalisation via metal housing on galvanised mounting plate | | |




Measurement distortions and sooting of contacts!

- For devices with PT100/ KTY or analog signal evaluation, no temperature switches may be installed in the detection chain as these can distort the signal and lead to incorrect measurements.
- A different protective measure must be used for devices with a temperature switch.

CONNECTION


| Mat. No. | Connection | | | Cross-section- al area in mm² / AWG | Tightening torque | | With tempera- ture switch |
|--------------|--------------|------------|-----|---|-------------------|------------|------------------------------|
| | Type | U, V, W | PE | | U, V, W | PE | |
| 07Z2F04-1003 | Terminal | Push-Lock | | 0.2...6 / 24...10 | — | — | — |
| 09Z2F04-1003 | | | | | | | |
| 10Z2F04-1003 | | | | | | | |
| 12Z2F04-1003 | | | | | | | |
| 13Z2F04-1003 | | RK 6-10/35 | M6 | 0.2...10 / 22...8 | 2 / 17.7 | 4.5 / 39.8 | |
| 14Z2F04-1003 | | | | | | | |
| 15Z2F04-1003 | | | | | | | |
| 16Z2F04-1003 | | | | | | | |
| 17Z2F04-1003 | | RK 16/35 | M8 | 2.5...16 / 10..6 | 4 / 35.4 | 10 / 88.5 | |
| 18Z2F04-1003 | | | | | | | |
| 19Z2F04-1003 | | | | | | | |
| 20Z2F04-1003 | Bolt | M10 | M8 | — | 5 / 44.3 | 20 / 177 | ✓ |
| 21Z2F04-1003 | | | | | | | |
| 22Z2F04-1003 | | | | | | | |
| 23Z2F04-1003 | | | | | | | |
| 24Z2F04-1003 | | | | | | | |
| 25Z2F04-1003 | | M12 | M10 | 40 / 354 | 20 / 177 | | |
| 26Z2F04-1003 | | | | | | | |
| 27Z2F04-1003 | | | | | | | |
| 28Z2F04-1003 | | | | | | | |
| 29Z2F04-1003 | | | | | | | |
| 30Z2F04-1003 | 33Z2F04-1003 | | | | | | |



Destruction of the motor filter!

- Mechanically interception of connection cables at a distance of 100 mm to ensure vibration resist-
ance.


START-UP AND OPERATION



Triggering of overcurrent protection devices

Risk of fire or electric shock!

- Triggering of an overcurrent protection device will be a hint for an overload or short circuit. Triggering a RCD may be caused by a leakage current.
- In order to reduce the risk of fire or electric shock, live parts and other components of the device should be checked and replaced in case of damage.



High temperatures on the device

Burning of the skin!


- Cover hot surfaces so that they are safe to touch.
- If necessary, attach warning signs to the system.
- Check surface before touching.
- Let the device cool down before any work is carried out.

MAINTENANCE

The following maintenance work has to be carried out when required, but at least once a year by authorised and trained personnel.

- Clean the product from dirt and dust deposits.
- In case of malfunction, unusual noises or smells inform a person in charge!
- In case of failure, please contact the machine manufacturer.


INSTALLATION / ELECTRICAL CONNECTION



Voltage at the terminals and the device!

Danger to life by electric shock!

- Never work under voltage on the device or touch exposed parts.
- For any work on the unit switch off the supply voltage and secure it against switching on.
- Wait until the mechanical drive system has stopped in order that no regenerative energy can be generated.
- Never bridge upstream protective devices (also not for test purposes).
- Connect the protective earth conductor properly.
- Install all required covers and protective devices for operation.

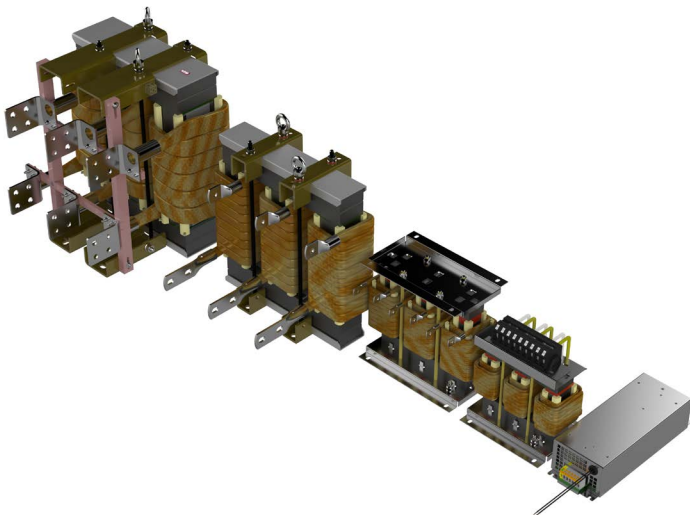


For a trouble-free and safe operation, please pay attention to the following note:

- Check for reliable fit of the device connections in order to avoid contact resistance and sparking.

DISPOSAL

- For professional disposal, follow the instructions in the instructions for use



COMBILINE Z2 MOTOR CHOKES

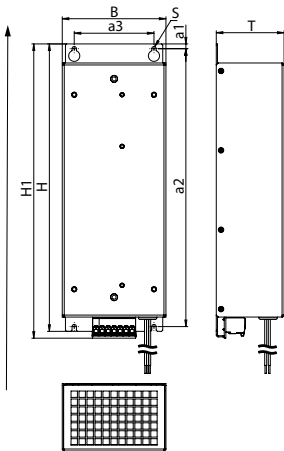
QUICK GUIDE

Translation of the original manual
Z2 series filters
Document 20237846 EN 01
Mat.No. 0FZ2N1M-0000

DIMENSIONS

07...12Z2F04-1003

Mounting direction

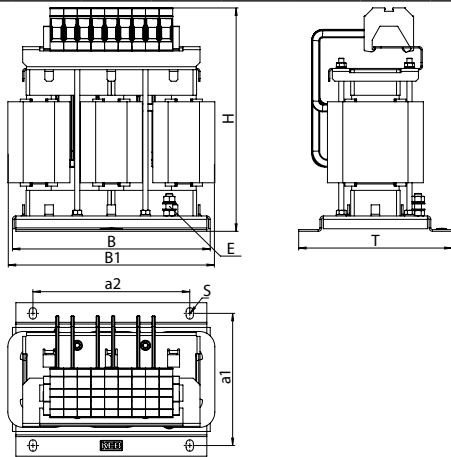


| Mat. No. | B | B1 | T | T1 | H | H1 | a1 | a2 | a3 | S | Weight |
|--------------|-----|----|----|----|-----|-----|----|-----|-----|----|--------|
| 07Z2F04-1003 | 130 | — | 85 | — | 362 | 371 | 6 | 350 | 100 | M5 | 3.5 |
| 09Z2F04-1003 | | | | | | | | | | | 3.9 |
| 10Z2F04-1003 | | | | | | | | | | | 4.1 |
| 12Z2F04-1003 | | | | | | | | | | | 4.7 |

All dimensions in mm; all weights in kg

13...19Z2F04-1003

Mounting direction

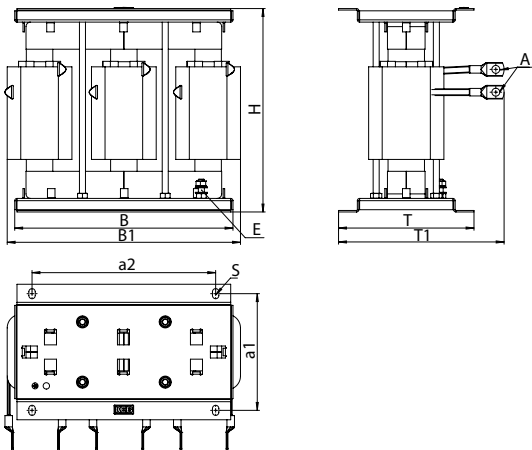


| Mat. No. | B | B1 | T | T1 | H | H1 | a1 | a2 | a3 | S | E | Weight |
|--------------|-----|----|-----|----|-----|----|-----|-----|----|----|----|--------|
| 13Z2F04-1003 | 168 | — | 160 | — | 272 | — | 155 | 184 | — | M6 | M6 | 5.2 |
| 14Z2F04-1003 | | | | | 271 | | | | | | | 5.5 |
| 15Z2F04-1003 | | | | | 300 | | | | | | | 6.6 |
| 16Z2F04-1003 | | | | | 301 | | | | | | | 7 |
| 17Z2F04-1003 | 232 | — | 180 | — | 247 | — | 155 | 184 | — | M8 | M8 | 10 |
| 18Z2F04-1003 | | | | | 250 | | | | | | | 11.2 |
| 19Z2F04-1003 | | | | | 260 | | | | | | | 11.7 |

All dimensions in mm; all weights in kg

20...22Z2F04-1003

Mounting direction

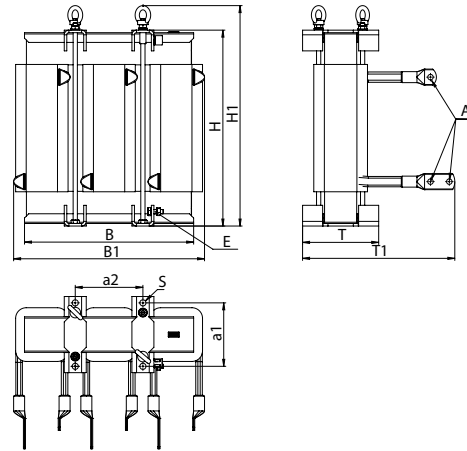


| Mat. No. | B | B1 | T | T1 | H | H1 | a1 | a2 | A | S | E | Weight |
|--------------|-----|-----|-----|-----|-----|----|-----|-----|-----|----|----|--------|
| 20Z2F04-1003 | 290 | 313 | 180 | 220 | 270 | — | 155 | 244 | M10 | M8 | M8 | 15 |
| 21Z2F04-1003 | | 314 | | 220 | 266 | | | | | | | 17.3 |
| 22Z2F04-1003 | | 322 | | 250 | 250 | | | | | | | 17 |

All dimensions in mm; all weights in kg

23...30Z2F04-1003

Mounting direction

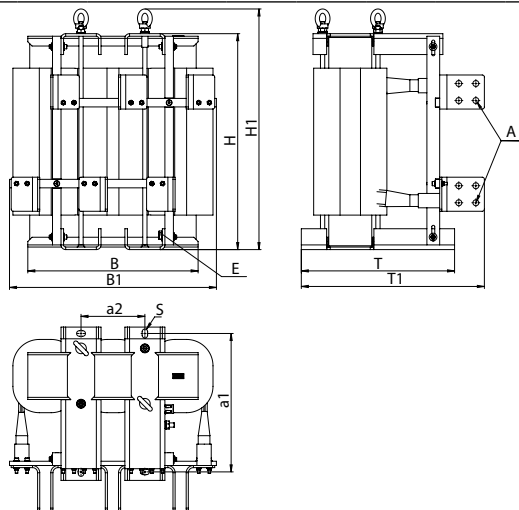


| Mat. No. | B | B1 | T | T1 | H | H1 | a1 | a2 | A | S | E | Weight |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| 23Z2F04-1003 | 310 | 360 | 170 | 285 | 331 | 389 | 144 | 120 | M10 | M12 | M10 | 32 |
| 24Z2F04-1003 | | 360 | | 285 | 343 | 401 | | | | | | 32.8 |
| 25Z2F04-1003 | | 344 | | 285 | 355 | 413 | | | | | | 35 |
| 26Z2F04-1003 | | 362 | | 315 | 366 | 424 | | | | | | 41 |
| 27Z2F04-1003 | 400 | 454 | 180 | 330 | 388 | 446 | 150 | 160 | M12 | M12 | M10 | 45 |
| 28Z2F04-1003 | | 441 | | 325 | 407 | 465 | | | | | | 58.5 |
| 29Z2F04-1003 | | 447 | | 350 | 421 | 479 | | | | | | 62 |
| 30Z2F04-1003 | | 451 | | 360 | 463 | 521 | | | | | | 72 |

All dimensions in mm; all weights in kg

31...33Z2F04-1003

Mounting direction



| Mat. No. | B | B1 | T | T1 | H | H1 | a1 | a2 | A | S | E | Weight |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| 31Z2F04-1003 | 400 | 486 | 360 | 430 | 460 | 518 | 325 | 150 | M12 | M12 | M10 | 5.2 |
| 32Z2F04-1003 | | | 360 | 430 | 507 | 565 | 325 | | | | | 5.5 |
| 33Z2F04-1003 | | | 385 | 455 | 503 | 561 | 350 | | | | | 6.6 |

All dimensions in mm; all weights in kg

INSTRUCTIONS FOR USE



Installation COMBILINE Z2 Ausgangsfilter
www.keb.de/fileadmin/media/Manuals/dr/ma_dr_z2-output-filter-inst_20184032_de.pdf

| | | | |
|------------|--|----|---------------------------------|
| KEB Online | www.keb.de | KR | 다른 언어도 사용할 수 있습니다. |
| BG | Други налични езици. | HR | Ostali dostupni jezici. |
| CN | 其他语言可用。 | HU | Más elérhető nyelvek. |
| CZ | Jiné jazyky k dispozici. | LV | Citas pieejamās valodas. |
| DK | Andre sprog til rådighed. | LT | Kitos kalbos. |
| DE | Weiteren Sprachen verfügbar. | MT | Lingwi oħra disponibbli. |
| EN | Other languages available. | NL | Andere talen beschikbaar. |
| EE | Muud keeled on saadaval. | PL | Inne dostępne języki. |
| ES | Otros idiomas disponibles. | PT | Outros idiomas disponíveis. |
| FI | Muut kielet saatavilla. | RO | Alte limbi disponibile. |
| FR | Autres langues disponibles. | RU | Доступны другие языки. |
| GR | Άλλες διαθεσίμες γλώσσες. | SE | Andra språk finns tillgängliga. |
| IE | Teangacha eile ar fáil. | SK | Iné jazyky sú k dispozícii. |
| IT | Altre lingue disponibili. | SI | Drugi jeziki so na voljo. |
| JP | 他の言語も利用できます。 | TR | Mevcut diğer diller. |