

Compax3H Short Description

High power devices

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German Master created.

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Downloads http://solutions.parker.com/c3_support

1. Notes on the Documents Supplied

Compax 3 - short
reference guide

This short reference guide does contain only the basic information; for more detailed information please refer to the Help-files of the individual Compax3 device types.

Compax3 - Download page:

http://solutions.parker.com/c3_Support

Here you find the Compax3 ServoManager, Firmware, Field Bus Files, Targets and Application examples.

Online help system

After the installation of the ServoManager you can copy the desired Online help system with the "C3 ServoManager Help Installer" (you can select the C3 device type as well as the desired language) to your PC. The help system can be called up directly from the ServoManager. You will find the complete description of the selected device type in these online help files.

Please note that the help files are associated with defined device and software versions.

NOTICE

Status of the Manuals:

Help and PDFs are updated simultaneously. In case of doubt the HTML help shows the actual state in comparison to PDF edition.

For additional HTML help please refer to our website.

1.1 C3 ServoManager

PC requirements

Minimum requirements:

Operating system: MS Windows XP SP3 / MS Vista (32 Bit) / Windows 7 (32 Bit / 64 Bit)
 Browser: MS Internet Explorer 8.x or higher
 Processor: Intel / AMD Multi core processor >=2GHz
 User : >= 1024MB
 Hard disk: >= 20GB available memory
 Monitor: Resolution 1024x768 or higher
 Graphics card: on onboard graphics (for performance reasons)
 Interface: USB 2.0

Note:

◆ For the installation of the software you need administrator authorization on the target computer.

Connection between PC and Compax3

Your PC is connected with Compax3 via a RS232 cable (SSK1) and an adapter cable.
 Cable SSK1 (COM 1/2-interface on the PC to X10 on the Compax3 or via adapter SSK32/20 on programming interface of Compax3H)*.
 Start the Compax3 ServoManager and make the setting for the selected interface in the "**Options Communication settings RS232/RS485...**" menu.

* please make sure that a suitable strain relief is used at the telephone socket of the programming port if a SSK1 >2m is utilized.

Device Selection

In the menu tree under device selection you can read the device type of the connected device (Online Device Identification) or select a device type (Device Selection Wizard).

Configuration

Then you can double click on "Configuration" to start the configuration wizard. The wizard will lead you through all input windows of the configuration.

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2. Introduction

In this chapter you can read about:

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2.1 Device assignment

This manual is valid for the following devices:

- ◆ Compax3H050V4 + supplement
- ◆ Compax3H090V4 + supplement
- ◆ Compax3H125V4 + supplement
- ◆ Compax3H155V4 + supplement

2.2 Scope of delivery

The following items are furnished with the device:

- ◆ Device accessories
 - Device accessories for Compax3H
 - ◆ Mating connector for X3 and X4
 - ◆ SSK32/20: RS232 adapter cable (programming port C3HxxxV4 - SSK1 - PC)
 - ◆ VBK17/01: SubD jumper mounted

2.3 Type specification plate

Compax3 - Type
specification plate
(example):

The present device type is defined by the type specification plate (on the housing):

| | | | | | | |
|--|---|----------------|---|---|---|----------------------|
|        | Parker Hannifin GmbH Robert-Bosch-Straße 22 77656 Offenburg Tel. +49 (0) 781/509-0 www.parker-eme.com | |  | | | |
| | 1 | 2 | 5 | 6 | 9 | 8 |
| | PN: C3M100D6F10I20T40M11S1 | | | | | |
| | 3 | SN: 2818200005 | | | | Tested: 7 14.06.2010 |
| |  | | | | | |
| Power Input: 4 565VDC | | | | | | |
| Power Output *: 4 3AC 400V (0...500 Hz), 10A | | | | | | |
| IP20 * see manual for further ratings (192-120148) | | | | | | |
| Made in Germany | | | | | | |

Explanation:

| | |
|----|---|
| 1 | Type designation: The complete order designation of the device (2, 5, 6, 9, 8). |
| 2 | C3: Abbreviation for Compax3 S025: Single axis device, nominal device current in 100mA (025=2.5A) M050: Multi-axis device, nominal device current in 100mA (050=5A) H050: High power device, nominal device current in 1A (050=50A) D6: Designation nominal supply V2: Mains supply voltage (2=230VAC/240VAC, 4=400VAC/480VAC) |
| 3 | Unique number of the particular device |
| 4 | Nominal supply voltage Power Input: Input supply data / Power Output: Output data |
| 5 | Designation of the feedback system F10: Resolver / F11: SinCos® / Single- or Multiturn / F12: Feedback module for direct drives |
| 6 | Device interface I10: Analog, step/direction and encoder input I11 / I12: Digital Inputs / Outputs and RS232 / RS485 I20: Profibus DP / I21: CANopen / I22: DeviceNet / I30: Ethernet Powerlink / I31: EtherCAT / I32: Profinet C20: integrated controller C3 powerPLmC, Linux & Web server |
| 7 | Date of factory test |
| 8 | Options Mxx: I/O extension, HEDA / Sx: optional safety technology on C3M |
| 9 | Technology function T10: Servo controller / T11: Positioning / T20: Pressure / Volume flow rate T30: Motion control in accordance with IEC61131-3 / T40: Electronic cam |
| 10 | CE compliance |
| 11 | Certified safety technology (corresponding to the logo displayed) |
| 12 | UL certified (corresponding to the logo displayed) |

2.4 Packaging, transport, storage

Packaging material and transport

CAUTION

Caution!

The packaging material is inflammable, if it is disposed of improperly by burning, lethal fumes may develop.

The packaging material must be kept and reused in the case of a return shipment. Improper or faulty packaging may lead to transport damages.

Make sure to transport the drive always in a safe manner and with the aid of suitable lifting equipment (**Weight** (see on page 15)). Do never use the electric connections for lifting. Before the transport, a clean, level surface should be prepared to place the device on. The electric connections may not be damaged when placing the device.

First device checkup

- ◆ Check the device for signs of transport damages.
- ◆ Please verify, if the indications on the **Type identification plate** (see on page 5) correspond to your requirements.
- ◆ Check if the consignment is complete.

Disposal

This product contains materials that fall under the special disposal regulation from 2010, which corresponds to the EC directory 2008/98/EC for dangerous disposal material. We recommend to dispose of the respective materials in accordance with the respectively valid environmental laws. The following table states the materials suitable for recycling and the materials which have to be disposed of separately.

| Material | suitable for recycling | Disposal |
|-------------------|------------------------|----------|
| Metal | yes | no |
| Plastic materials | yes | no |
| Circuit boards | no | yes |

Please dispose of the circuit boards according to one of the following methods:

- ◆ Burning at high temperatures (at least 1200°C) in an incineration plant licensed in accordance with part A or B of the environmental protection act.
- ◆ Disposal via a technical waste dump which is allowed to take on electrolytic aluminum condensers. Do under no circumstances dump the circuit boards at a place near a normal waste dump.

Storage

If you do not wish to mount and install the device immediately, make sure to store it in a dry and clean environment. Make sure that the device is not stored near strong heat sources and that no metal chippings can get into the device.

Please note in the event of storage >1 year:

Forming the capacitors

Forming the capacitors only required with 400 VAC axis controllers and mains module PSUP

If the device was stored longer than one year, the intermediate capacitors must be re-formed!

Forming sequence:

- ◆ Remove all electric connections
- ◆ Supply the device with 230VAC single phase for 30 minutes
 - ◆ via the L1 and L2 terminals on the device or
 - ◆ with multi axis devices via L1 and L2 on the mains module PSUP.

2.5 Safety instructions

2.5.1. General hazards

General Hazards on Non-Compliance with the Safety Instructions

The device described in this manual is designed in accordance with the latest technology and is safe in operation. Nevertheless, the device can entail certain hazards if used improperly or for purposes other than those explicitly intended.

Electronic, moving and rotating components can

- ◆ cause danger for life and limb of the operator and
- ◆ material damage

Designated use

The device is designed for operation in electric power drive systems (VDE0160). Motion sequences can be automated with this device. Several motion sequences can be combined by interconnecting several of these devices. Mutual interlocking functions must be incorporated for this purpose.

2.5.2. Working safely / qualification

This device may be operated only by qualified personnel.

Qualified personnel in the sense of these operating instructions consists of:

- ◆ Persons who, by virtue to their training, experience and instruction, and their knowledge of pertinent norms, specifications, accident prevention regulations and operational relationships, have been authorized by the officer responsible for the safety of the system to perform the required task and in the process are capable of recognizing potential hazards and avoiding them (definition of technical personnel according to VDE105 or IEC364),
- ◆ who have a knowledge of first-aid techniques and the local emergency rescue services,
- ◆ who have read and will observe the safety instructions,
- ◆ who have read and observe the manual or help (or the sections pertinent to the work to be carried out).

This applies to all work relating to setting up, commissioning, configuring, programming, modifying the conditions of utilization and operating modes, and to maintenance work.

This manual and the help information must be available close to the device during the performance of all tasks.

2.5.3. Special dangers



DANGER

Danger!

Due to movable machine parts and high voltages, the device can pose a lethal danger. Danger of electric shock in the case of non-respect of the following instructions. The device corresponds to DIN EN 61800-3, i.e. it is subject to limited sale. The device can emit disturbances in certain local environments. In this case, the user is liable to take suitable measures.

- ◆ Check that all live terminals are secured against contact. Perilous voltage levels of up to 850V occur.
- ◆ Do not bypass power direct current.



DANGER

Caution - Risk of Electric Shock!

Always switch off devices before wiring them!

Dangerous voltages are still present until 10 min. after switching off the power supply.

- ◆ The device must be permanently grounded due to high earth leakage currents.
 - ◆ The drive motor must be grounded with a suitable protective lead.
 - ◆ The devices are equipped with high voltage DC condensers. Before removing the protective cover, the discharging time must be awaited. After switching off the supply voltage, it may take up to 10 minutes (with additional capacity modules it may take up to 30 minutes) to discharge the capacitors.
- Danger of electric shock in case of non respect.

- ◆ Before you can work on the device, the supply voltage must be switched off at the L1, L2 and L3 clamps. Wait at least 10 minutes so that the power direct current may sink to a secure value (<50V). Check with the aid of a voltmeter, if the voltage at the DC+ and DC- clamps has fallen to a value below 50V.
Danger of electric shock in case of non respect.
- ◆ Do never perform resistance tests with elevated voltages (over 690V) on the wiring without separating the circuit to be tested from the drive.
- ◆ Please exchange devices only in currentless state and, in an axis system, only in a defined original state.
- ◆ If the axis controller is replaced, it is absolutely necessary to transfer the configuration determining the correct operation of the drive to the device, before the device is put into operation. Depending on the operation mode, a machine zero run will be necessary.
- ◆ The device contains electrostatically sensitive components. Please heed the electrostatic protection measures while working at/with the device as well as during installation and maintenance.

2.6 Warranty conditions

- ◆ The device must not be opened.
- ◆ Do not make any modifications to the device, except for those described in the manual.
- ◆ Make connections to the inputs, outputs and interfaces only in the manner described in the manual.
- ◆ Fix the devices according to the **mounting instructions**. (see on page 13)
We cannot provide any guarantee for other mounting methods.

Note on exchange of options

Device options must be exchanged in the factory to ensure hardware and software compatibility.

- ◆ When installing the device, make sure the heat dissipators of the device receive sufficient air and respect the recommended mounting distances of the devices with integrated ventilator fans in order to ensure free circulation of the cooling air.
- ◆ Make sure that the mounting plate is not exposed to external temperature influences.

2.7 Conditions of utilization

In this chapter you can read about:

| | |
|---|----|
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2.7.1. Conditions of utilization for CE-conform operation

- Industry and trade -

The EC guidelines for electromagnetic compatibility 2014/30/EU and for electrical operating devices for utilization within certain voltage limits 2014/35/EU are fulfilled when the following boundary conditions are observed:

Operation of devices only in the state in which they are delivered.

In order to ensure contact protection, all mating plugs must be present on the device connections even if they are not wired.
Please respect the specifications of the manual resp. of the help function, especially the technical characteristics (mains connection, circuit breakers, output data, ambient conditions,...).

2.7.1.1 Conditions of utilization mains filter

Mains filter: A mains filter is required in the mains input line if the motor cable exceeds a certain length. Filtering can be provided centrally at the system mains input or separately for jedes Gerät.

Use of the devices in a commercial and residential area (limit value class in accordance with EN 61800-3)

The following mains filters are available for independent utilization:

| Device: Compax3H | Limit value class | Motor cable length | Mains filter Order No.: |
|---------------------|----------------------|--------------------|----------------------------|
| H050V4 | C2 | < 10 m | without |
| | C2 | > 10 m, < 50 m | NFI02/01 |
| H090V4 | C2 | < 10 m | without |
| | C2 | > 10 m, < 50 m | NFI02/02 |
| H1xxV4 | C2 | < 10 m | without |
| | C2 | > 10 m, < 50 m | NFI02/03 |

Connection length: Connection between mains filter and device:

unshielded: < 0.5 m

shielded < 5 (fully shielded on ground - e.g. ground of control cabinet)

2.7.1.2 Conditions of utilization for cables / motor filter

Motor and Feedback cable: Operation of the devices only with motor and feedback cables whose plugs contain a special full surface area screening.

Compax3H motor cable A motor output filter is required for motor cables >50m. Please contact us.

Shielding connection of the motor cable The cable must be fully-screened and connected to the device housing. Use the cable clamps/shield connecting terminals furnished with the device.
The shield of the cable must also be connected with the motor housing. The fixing (via plug or screw in the terminal box) depends on the motor type.

Feedback cable < 100 m
**Compax3S,
Compax3H &
Compax3F:**

Cable Corresponding to the specifications of the terminal clamp with a temperature range of up to 75°C.

Cable installation:

- ◆ Signal lines and power lines should be installed as far apart as possible.
- ◆ Signal lines should never pass close to excessive sources of interference (motors, transformers, contactors etc.).
- ◆ Do not place mains filter output cable parallel to the load cable.

2.7.1.3 Additional conditions of utilization

Motors: Operation with standard motors.

Control: Use only with aligned controller (to avoid control loop oscillation).

Grounding: Connect the filter housing and the device to the cabinet frame, making sure that the contact area is adequate and that the connection has low resistance and low inductance.

Never mount the filter housing and the device on paint-coated surfaces!

Accessories: Make sure to use only the accessories recommended by Parker.

Connect all cable shields at both ends, ensuring large contact areas!

NOTICE

This is restricted operation category product according to EN 61800-3. This product can cause high-frequency disturbance in domestic areas. Users are asked to take suitable action if this proves to be the case.

2.7.2. Conditions of utilization for UL certification Compax3H

UL certification for Compax3H

| | |
|----------------|-----------------------|
| Conform to UL: | ◆ according to UL508C |
| Certified | ◆ E-File_No.: E142140 |

The UL certification is documented by a "UL" logo on the device (type specification plate).

"UL" logo:



Conditions of utilization

- ◆ The devices are only to be installed in a degree of contamination 2 environment (maximum).
- ◆ The devices must be appropriately protected (e.g. by a switching cabinet).
- ◆ Tightening Torque of the Field Wiring Terminals.

Terminal clamps - max. line cross sections

The line cross sections must correspond to the locally valid safety regulations. The local regulations have always priority.

| | Power clamps (minimum/maximum section) | |
|--|---|------------------------|
| C3H050V4 | 2.5 / 16mm ² | |
| | Massive | Multiwire |
| C3H090V4 | 16 / 50mm ² | 25 / 50mm ² |
| C3H1xxV4 | 25 / 95mm ² | 35 / 95mm ² |
| <i>The standard connection clamps of Compax3H090V4 and Compax3H1xxV4 are not suitable for flat line bars.</i> | | |

Temperature rating of field installed conductors shall be at least 75°C. Do only use copper lines.

- ◆ Maximum Surrounding Air Temperature: 45°C.
- ◆ Motor overtemperature monitoring is only supported, if the external temperature sensor is connected.
- ◆ Suitable for use on a circuit capable of delivering not more than 18000A symmetrical amperes effectively when protected with fuses as follows:

| Device | Protection data |
|----------|-----------------|
| C3H050V4 | 480 VAC 80 A |
| C3H090V4 | 480 VAC 100 A |
| C3H125V4 | 480 VAC 160 A |
| C3H155V4 | 480 VAC 200 A |

Caution!

Risk of electric shock.

Upon removing power to the equipment, please wait at least 10 minutes before accessing the device to ensure internal voltage levels are less than 50VDC.

- ◆ The drive provides internal motor overload protection.
This must be set so that 200% of the motor nominal current are not exceeded.
- ◆ Cable cross-sections
 - ◆ Mains input: corresponding to the recommended fuses.
 - ◆ Motor cable: corresponding to the Nominal output currents
 - ◆ This device is provided with Solid State Short Circuit (output) Protection.



2.7.3. Current on the mains PE (leakage current)



WARNING

This product can cause a direct current in the protective lead. If a residual current device (RCD) is used for protection in the event of direct or indirect contact, only a type B (all current sensitive) RCD is permitted on the current supply side of this product. Otherwise, a different protective measure must be taken, such as separation from the environment by doubled or enforced insulation or separation from the mains power supply by means of a transformer. Respect the supplier's instructions.

Mains filters do have high leakage currents due to their internal capacity. An internal mains filter is usually integrated into the servo controllers. Additional discharge currents are caused by the capacities of the motor cable and the motor winding. Due to the high clock frequency of the power output stage, the leakage currents do have high-frequency components. Please check if the FI protection switch is suitable for the individual application.

If an external mains filter is used, an additional leakage current will be produced.

The figure of the leakage current depends on the following factors:

- ◆ Length and properties of the motor cable
- ◆ Switching frequency
- ◆ Operation with or without external mains filter
- ◆ Motor cable with or without shield network
- ◆ Motor housing grounding (how and where)

Remark:

- ◆ The leakage current is important with respect to the handling and usage safety of the device.
- ◆ A pulsing leakage current occurs if the supply voltage is switched on.

Please note:

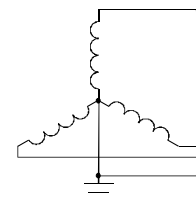
The device must be operated with effective grounding connection, which must comply with the local regulations for high leakage currents (>3.5 mA).

Due to the high leakage currents it is not advisable to operate the servo drive with an earth leakage circuit breaker.

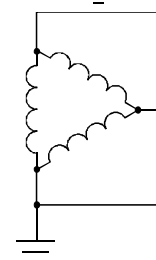
2.7.4. Supply networks

This product is designed for fixed connection to TN networks (TN-C, TN-C-S or TN-S). Please note that the line-earth voltage may not exceed 300VAC.

- ◆ When grounding the neutral conductor, mains voltages of up to 480VAC are permitted.



- ◆ When grounding an external conductor (delta mains, two-phase mains), mains voltages (external conductor voltages) of up to 240VAC are permitted.



Devices which are to be connected to an IT network must be provided with a separating transformer. Then the devices are operated locally as in a TN network. The secondary sided center of the separating transformer must be grounded and connected to the PE connector of the device.

2.8 EC declaration of conformity Compax3H



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EU KONFORMITÄTSERKLÄRUNG EU DECLARATION OF CONFORMITY

Dokumenten Nr. **DoC002-R 6.0**
Declaration No.

Der Hersteller **Parker Hannifin Manufacturing Germany GmbH & Co. KG**
The Manufacturer

Anschrift **Robert-Bosch-Straße 22**
Address **77656 Offenburg**
Deutschland

erklärt in alleiniger Verantwortung die Konformität der folgenden Produktreihe
declares under sole responsibility the conformity of the following product series

Produkt **Antrieb**
Product **Drive**

Produktname **Compax3 Serie – C3H (Einachsfamilie-Hohe Leistung)**
Product name **Compax3 series – C3H (Single axis family-High power)**

Angewandte harmonisierte Normen / *Applied harmonized standards:*

| Norm / Standard | Titel / Title |
|---------------------------|--|
| EN 61800-5-1:2007 | Elektrische Leistungsantriebssysteme mit einstellbarer Drehzahl Teil 5-1: Anforderungen an die Sicherheit – Elektrische, thermische und energetische Anforderungen <i>Adjustable speed electrical power drive systems</i> <i>Part 5-1: Safety requirements - Electrical, thermal and energy</i> |
| EN 61800-3:2004 + A1:2012 | Drehzahlveränderbare elektrische Antriebe Teil 3: EMV-Anforderungen einschließlich spezieller Prüfverfahren <i>Adjustable speed electrical power drive systems</i> <i>Part 3: EMC product standard including specific test methods.</i> |
| EN50581:2012 | Technische Dokumentation zur Beurteilung von Elektro- und Elektronikgeräten hinsichtlich der Beschränkung gefährlicher Stoffe <i>Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances</i> |

Die Produkte entsprechen den Anforderungen der Niederspannungs-Richtlinie 2014/35/EU, der EMV-Richtlinie 2014/30/EU und der RoHS Richtlinie 2011/65/EU

The products are in accordance with the Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU and the RoHS directive 2011/65/EU

Bemerkungen / Notes:

Den im Produkthandbuch beschriebenen Sicherheits-, Installations- und Bedienungshinweisen muss Folge geleistet werden.

These products must be installed and operated with reference to the instructions in the product manual.

All instructions, warnings and safety information of the product manual must be adhered to.

Die Produkte sind für den Einbau in eine andere Maschine bestimmt. Die Inbetriebnahme ist solange untersagt, bis die Konformität des Endproduktes gemäß der Maschinen-Richtlinie 2006/42/EG festgestellt ist.

The products are components to be incorporated into machinery and may not be operated alone. The complete machinery or installation may only be put into service when the safety considerations of the Machinery Directive 2006/42/EC are fully adhered to.

Offenburg, 2017-07-23

Jürgen Killius, Operations Manager

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Parker Hannifin Manufacturing Germany GmbH & Co. KG
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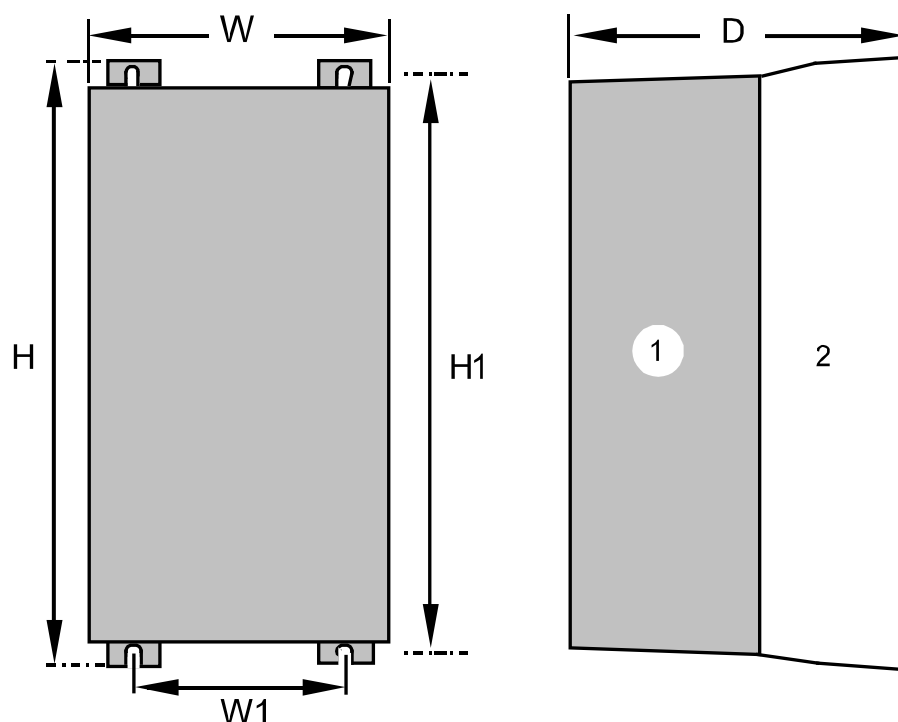
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BIC/Swift-Code: COBADEFF
IBAN DE95 6644 0084 0450 1912 00

Geschäftsführung:
Dr.-Ing. Hans-Jürgen Haas, Ellen Raahede Secher, Günter Schrank, Kees Veraart
Vorsitzender des Aufsichtsrates: Hansgeorg Greuner

3. Mounting and dimensions C3H

The devices must be mounted vertically on a level surface in the control cabinet.

Dimensions:



(1): Electronics
(2): Head dissipator

| | H | H1 | D | W | W1 |
|-----------------|---------|-------|-------|-------|-------|
| C3H050V4 | 453mm | 440mm | 245mm | 252mm | 150mm |
| C3H090V4 | 668.6mm | 630mm | 312mm | 257mm | 150mm |
| C3H1xxV4 | 720mm | 700mm | 355mm | 257mm | 150mm |

Mounting: 4 screws M6

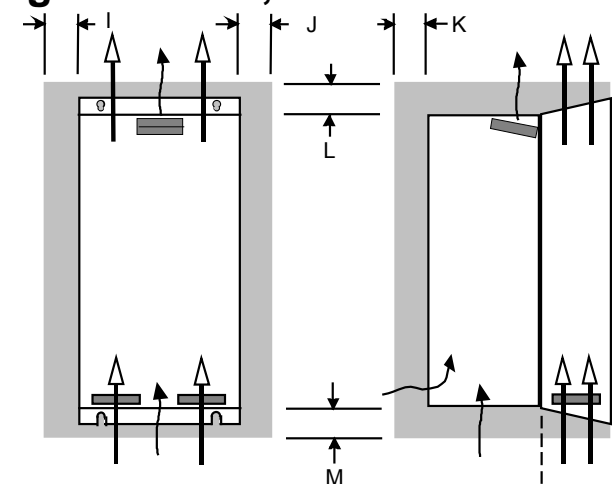
⚠ CAUTION

Ventilation:

- ◆ During operation, the device radiates heat (heat dissipation). Please provide for a sufficient mounting distance below and above the device in order to ensure free circulation of the cooling air.
- ◆ Please do also respect the recommended distances of other devices.
- ◆ Make sure that the mounting plate is not exhibited to other temperature influences than that of the devices mounted on this very plate.
- ◆ The devices must be mounted vertically on a level surface. Make sure that all devices are sufficiently fixed.

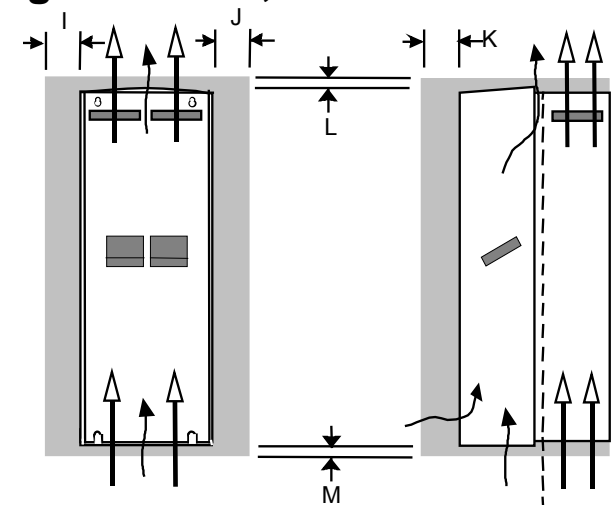
If two or more devices are combined, the mounting distances are added.

3.1 Mounting distances, air currents Compax3H050V4



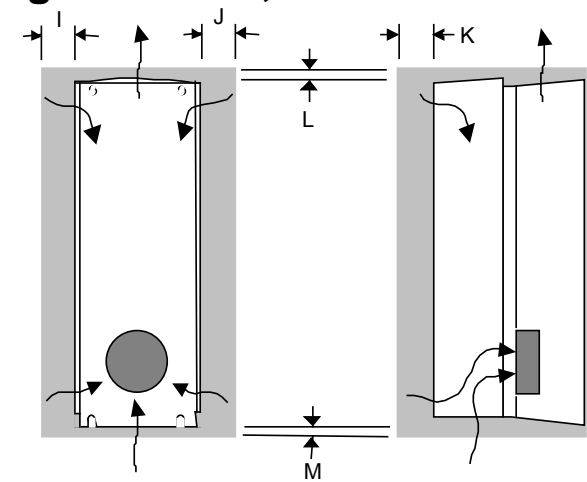
| [mm] | I | J | K | L | M |
|----------|----|---|----|----|----|
| C3H050V4 | 15 | 5 | 25 | 70 | 70 |

3.2 Mounting distances, air currents Compax3H090V4



| [mm] | I | J | K | L | M |
|----------|---|---|----|----|----|
| C3H090V4 | 0 | 0 | 25 | 70 | 70 |

3.3 Mounting distances, air currents Compax3H1xxV4



| [mm] | I | J | K | L | M |
|----------|---|---|----|----|----|
| C3H1xxV4 | 0 | 0 | 25 | 70 | 70 |

4. Technical Data

Mains connection Compax3HxxxV4 3*400VAC

| Device type Compax3 | H050V4 | H090V4 | H125V4 | H155V4 |
|---|--|--------|---------|---------|
| Continuous working voltage | Three-phase 3*400VAC 350-528VAC / 50-60Hz | | | |
| Receiver current consumption | 66Arms | 95Arms | 143Arms | 164Arms |
| Output current | 50Arms | 90Arms | 125Arms | 155Arms |
| Maximum input fuse rating per device | 80A | 100A | 160A | 200A |
| Recommended line protection in accordance with UL | JDDZ Class K5 or H JDRX Class H | | | |

Mains connection Compax3HxxxV4 3*480VAC

| Device type Compax3 | H050V4 | H090V4 | H125V4 | H155V4 |
|---|--|--------|---------|---------|
| Continuous working voltage | Three-phase 3*480VAC 350-528VAC / 50-60Hz | | | |
| Receiver current consumption | 54Arms | 82Arms | 118Arms | 140Arms |
| Output current | 43Arms | 85Arms | 110Arms | 132Arms |
| Maximum input fuse rating per device | 80A | 100A | 160A | 200A |
| Recommended line protection in accordance with UL | JDDZ Class K5 or H JDRX Class H | | | |

Control voltage 24VDC Compax3S and Compax3H

| Controller type | Compax3 |
|--|---|
| Voltage range | 21 - 27VDC |
| Current drain of the device | 0.8 A |
| Total current drain | 0.8 A + Total load of the digital outputs + current for the motor holding brake |
| Ripple | 0.5Vpp |
| Requirement according to safe extra low voltage (SELV) | yes |
| Short-circuit proof | conditional (internally protected with 3.15AT) |

Detailed information on the technical data of the Compax3 devices can be found in the Help- or PDF-files of the individual Compax3 device types.

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