

Assembly instructions | EN

AX2090-MD50

Motor choke

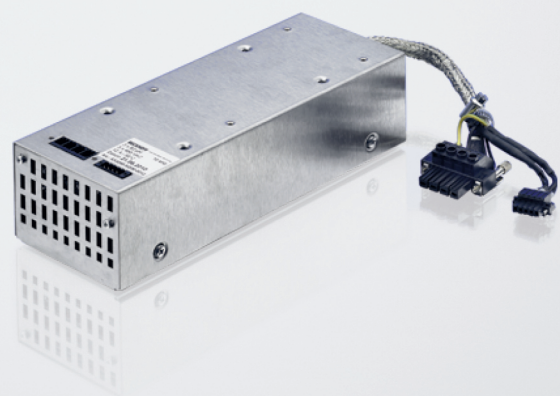


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1 Foreword

1.1 Notes on the documentation

This description is only intended for the use of trained specialists in control and automation engineering who are familiar with applicable national standards.

It is essential that the documentation and the following notes and explanations are followed when installing and commissioning the components.

It is the duty of the technical personnel to use the documentation published at the respective time of each installation and commissioning.

The responsible staff must ensure that the application or use of the products described satisfy all the requirements for safety, including all the relevant laws, regulations, guidelines and standards.

Disclaimer

The documentation has been prepared with care. The products described are, however, constantly under development.

We reserve the right to revise and change the documentation at any time and without prior announcement. No claims for the modification of products that have already been supplied may be made on the basis of the data, diagrams and descriptions in this documentation.

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1.2 Documentation issue status

Version	Comment
1.2	<ul style="list-style-type: none"> • Structure update • Technical data updated
1.1	<ul style="list-style-type: none"> • Structure update
1.0	<ul style="list-style-type: none"> • First version

1.3 For your safety

Safety regulations

Read the following explanations for your safety.

Always observe and follow product-specific safety instructions, which you may find at the appropriate places in this document.

Exclusion of liability

All the components are supplied in particular hardware and software configurations which are appropriate for the application. Modifications to hardware or software configurations other than those described in the documentation are not permitted, and nullify the liability of Beckhoff Automation GmbH & Co. KG.

Personnel qualification

This description is only intended for trained specialists in control, automation, and drive technology who are familiar with the applicable national standards.

Signal words

The signal words used in the documentation are classified below. In order to prevent injury and damage to persons and property, read and follow the safety and warning notices.

Personal injury warnings

DANGER

Hazard with high risk of death or serious injury.

WARNING

Hazard with medium risk of death or serious injury.

CAUTION

There is a low-risk hazard that could result in medium or minor injury.

Warning of damage to property or environment

NOTICE

The environment, equipment, or data may be damaged.

Information on handling the product



This information includes, for example: recommendations for action, assistance or further information on the product.

2 Electrical connection

The motor chokes are connected based on the "plug & play" principle. Pull the two plug connectors from the existing motor cable of the AX5000 and plug them into the sockets of the motor choke. The two plugs of the integrated motor choke cable are then plugged into the socket of the AX5000.

⚠ WARNING

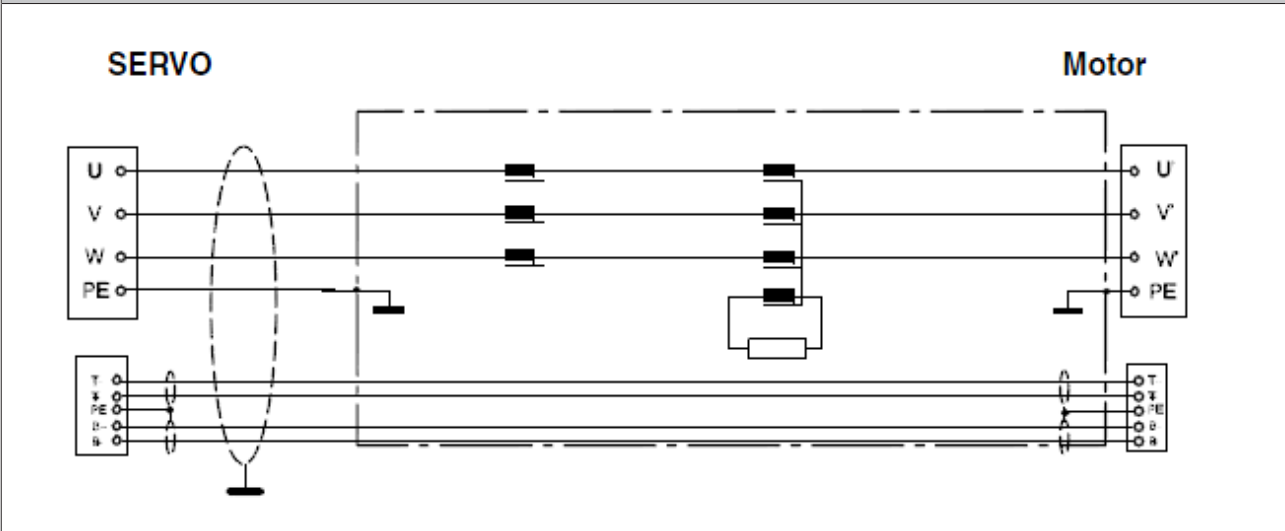
Caution - Risk of injury through electric shock!

De-energize all electrical components (servo drive, control cabinet etc.) before commencing the installation or deinstallation of the motor choke.

● Connection cables

i Use exclusively Beckhoff motor cables and firmly tighten the connecting plugs. Max. tightening torque - M4 thread = 1.5 Nm ±0.1 Max. tightening torque - M3 thread (motor connector) = 0.6 Nm ±0.1.

Connection example



3 Technical data

Nominal motor current	Motor cable length	Servo drive	Motor choke
max. 400 V	≥25 m to 100 m	AX5101, AX5103, AX5106, AX5112,	AX2090-MD50-0012
max. 480 V	>20 m to 100 m	AX5201, AX5203, AX5206	
max. 400 V	≥25 m to 50 m	AX5118 and AX5125	AX2090-MD50-0025
max. 480 V	>20 m to 50 m		
Data	AX2090-MD50-0012	AX2090-MD50-0025	
Nominal voltage	480 V AC	480 V AC	
Rated frequency	0 – 60 Hz	0 – 60 Hz	
Test voltage cable/cable for 2 s	1770 V DC	1770 V DC	
Test voltage cables/housing for 2 s	2700 V DC	2700 V DC	
Rated temperature	50 °C	50 °C	
Inductance	0.2 mH	0.12 mH	
Continuous load operation (S1)	12 A	25 A	
Climate category (IEC 60068-1)	25/100/21	25/100/21	
Approval	UL 1283 / UL File No. E10122	UL 1283 / UL File No. E10122	
Resistance [type]	25 mΩ	15 mΩ	
Power loss	5 - 25 W ¹⁾³⁾	10 -35 W ²⁾⁴⁾	
Weight	2.9 kg	8.5 kg	

¹⁾nominal current 1 - 12 A

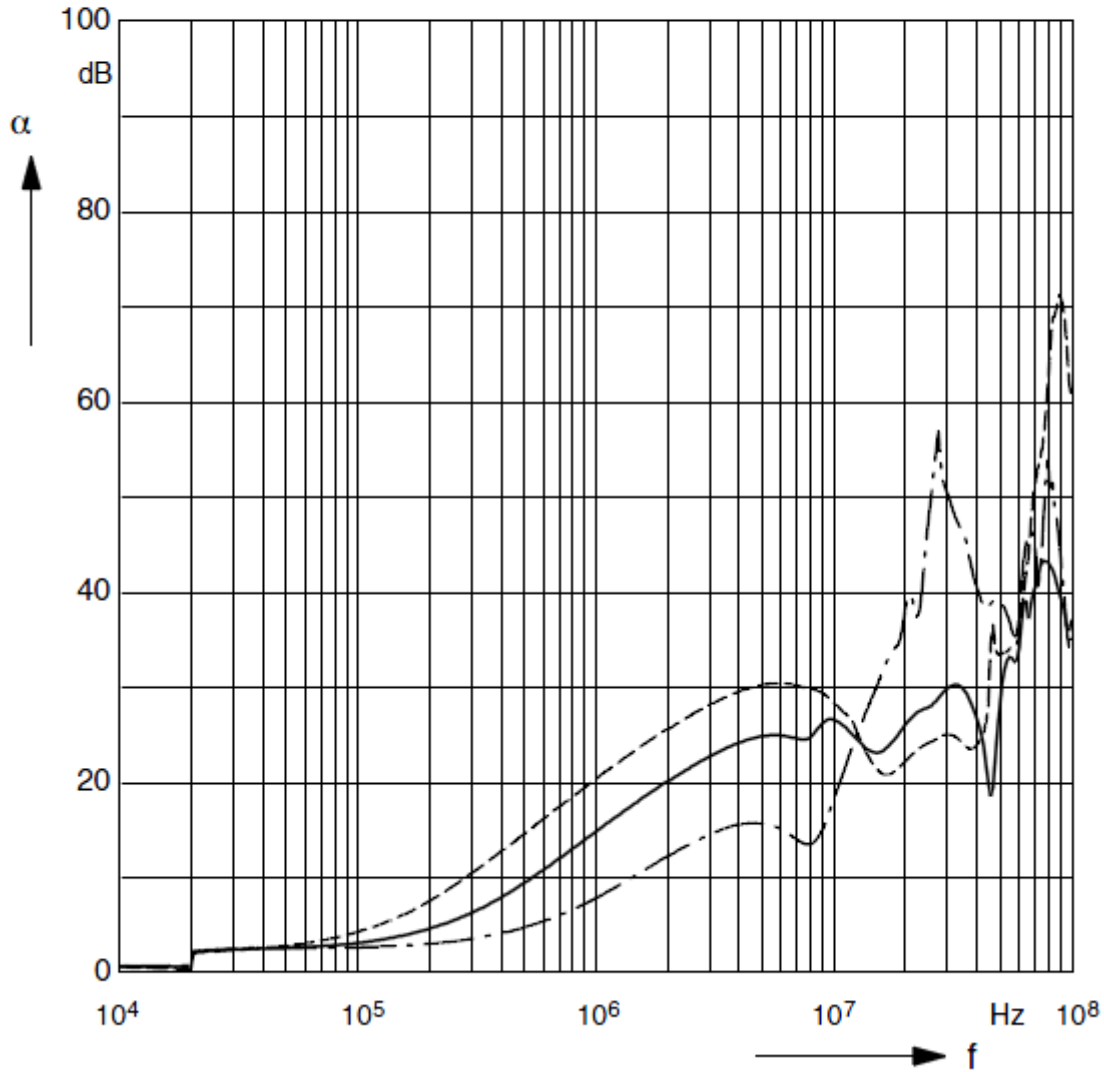
²⁾nominal current 18 - 25 A

³⁾measured at max. cable length of 100 m

⁴⁾measured at max. cable length of 50 m

Insertion loss (guide values for $Z = 50 \Omega$)

- unsymmetrisch, Abschluss der Nachbarzweige
- · - asymmetrisch, alle Zweige parallel (common mode)
- - - symmetrisch (differential mode)



4 Installation of the motor choke AX2090-MD50-0012

⚠ CAUTION

Destruction of the motor choke!

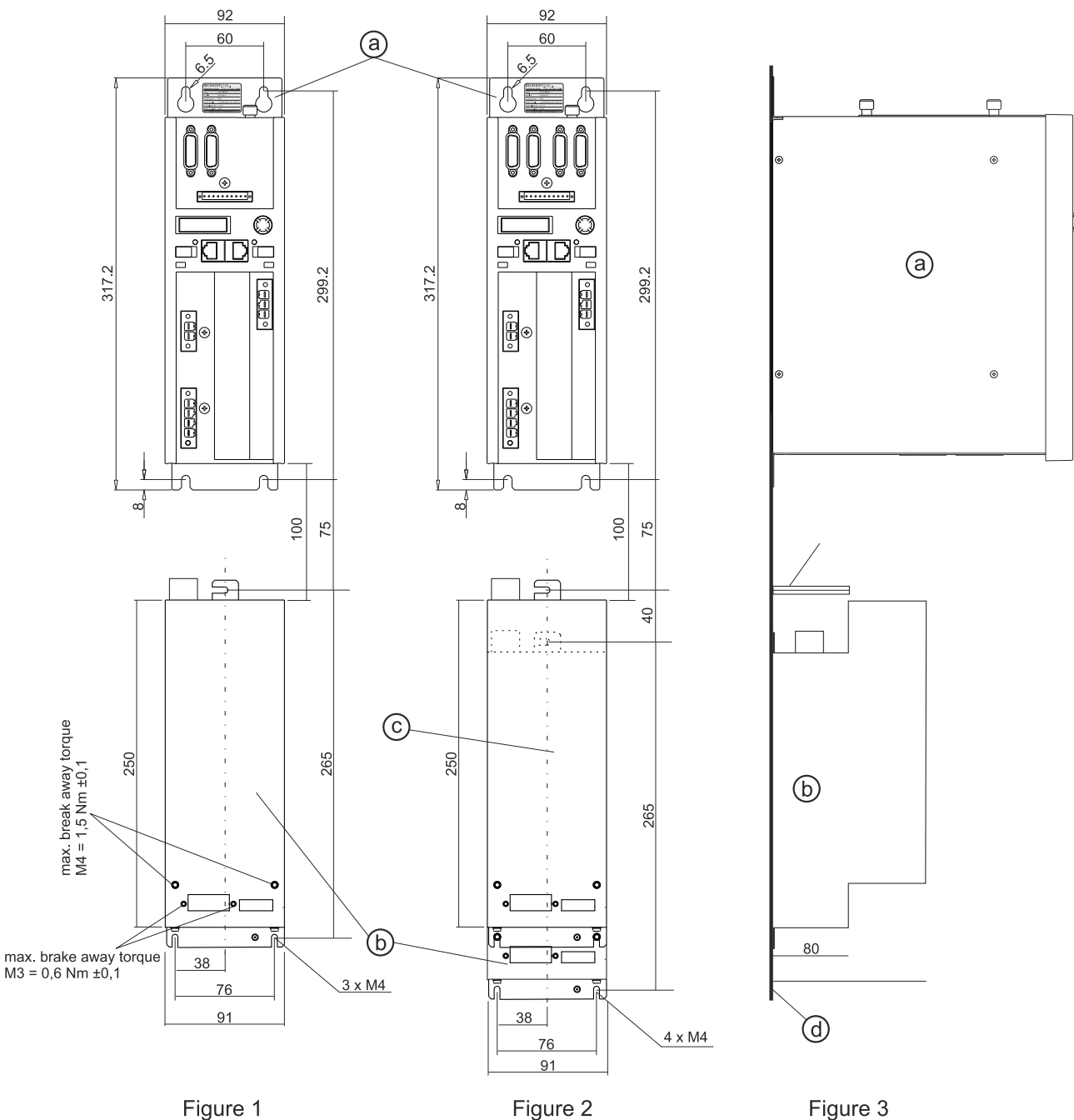
- Always install the motor choke vertically on an earthed metallic mounting plate. If no metallic mounting plate is available, you must earth the motor choke; an earthing bolt is provided on the motor choke for this purpose.
- Ensure adequate ventilation of the motor choke. The permissible ambient conditions are specified in the chapter "Technical data".
- It is essential to maintain the necessary distances to the AX5000 (see sketches below).

The motor chokes for the AX5000 (a) with a max. rated channel current of 12 A are bolted to the mounting plate (d) below the device.

'Figure 1' shows a motor choke (b) for one channel.

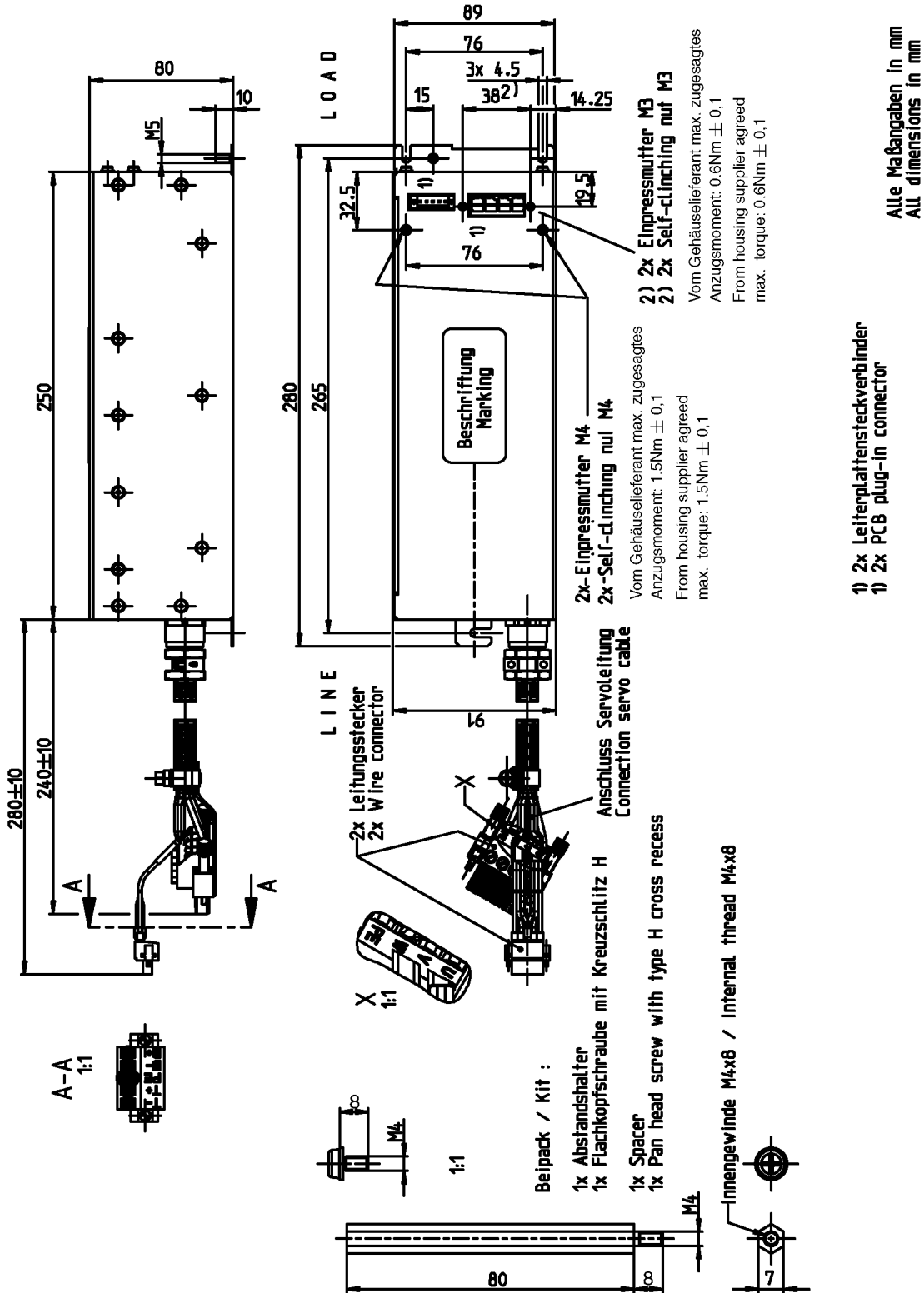
In the case of 2-channel devices, the motor chokes are bolted on top of one another; see 'figures 2 and 3'.

The spacer (e) is supplied with the motor choke.

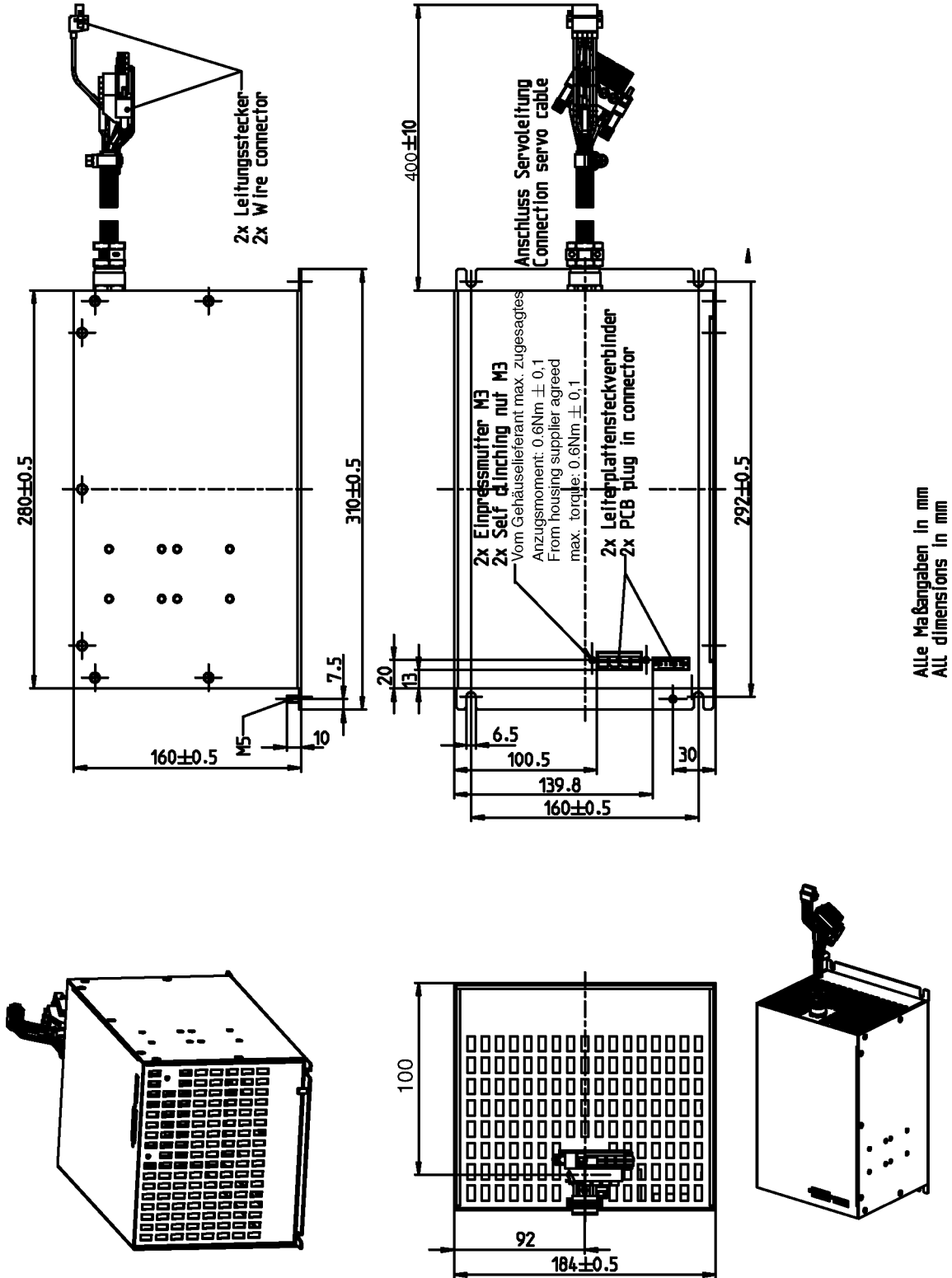


5 Dimensions

5.1 AX2090-MD50-0012



5.2 AX2090-MD50-0025



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