



SEW
EURODRIVE



MOVIAXIS® MX Multi-Axis Servo Inverter

10 kW Supply Module MXP81 with

Integrated Braking Resistor

Edition 04/2008

11682213 / EN

Operating Instructions





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1 General Information

1.1 *Applicable documentation*

These operating instructions describe the specific properties of the 10 kW power supply module with integrated braking resistor.

For all other information and functionalities of MOVIAXIS®, refer to the following documents:

- "MOVIAXIS® Multi-Axis Servo Inverter" operating instructions
- "MOVIAXIS® Multi-Axis Servo Inverter" project planning manual

1.2 *Important notes on the supply module with integrated braking resistor*

Using an external braking resistor

When using an external braking resistor, it has to be projected and dimensioned in such a way that it can convert the maximum energy, which occurs in the application, into heat.

Non-permitted combinations



Do not combine a supply module with integrated braking resistor with the following units:








- Capacitor module,
- Damping module,
- DC link discharge module.



1.3 Structure of the safety notes

The safety notes in these operating instructions are structured as follows:

Symbol	 SIGNAL WORD!
	<p>Nature and source of hazard.</p> <p>Possible consequence(s) if disregarded.</p> <ul style="list-style-type: none"> Measure(s) to avoid the hazard.

Symbol	Signal word	Meaning	Consequences if disregarded
<p>Example:</p>  <p>General hazard</p>  <p>Specific hazard, e.g. electric shock</p>	<p> HAZARD!</p> <p> WARNING!</p> <p> CAUTION!</p>	<p>Imminent hazard</p> <p>Possible hazardous situation</p> <p>Possible hazardous situation</p>	<p>Severe or fatal injuries</p> <p>Severe or fatal injuries</p> <p>Minor injuries</p>
	STOP!	Possible damage to property	Damage to the drive system or its environment
	NOTE	Useful information or tip. Simplifies handling of the drive system.	



1.4 *Rights to claim under warranty*

A **requirement of fault-free operation** and fulfillment of any rights to claim under limited warranty is that you adhere to the information in **this manual** and the **"MOVIAXIS® Multi-Axis Servo Inverter" operating instructions**. **Read the operating instructions** before you start operating the unit!

Make sure that the operating instructions are available to persons responsible for the system and its operation as well as to persons who work independently on the unit. You must also ensure that the documentation is legible.


1.5 *Exclusion of liability*

You must comply with the information contained in the operating instructions at hand and in the **"MOVIAXIS® Multi-Axis Servo Inverter" operating instructions** to ensure safe operation of the 10 kW supply module with integrated braking resistor in conjunction with the MOVIAXIS® multi-axis servo inverter, and to achieve the specified product characteristics and performance requirements. SEW-EURODRIVE assumes no liability for injury to persons or damage to equipment or property resulting from non-observance of these operating instructions. In such cases, any liability for defects is excluded.



2 Safety Notes

The following basic safety notes are intended to prevent injury to persons and damage to property. The operator must ensure that the basic safety notes are read and observed. Make sure that persons responsible for the system and its operation, as well as persons who work independently on the unit, have read through the operating instructions carefully and understood them. If you are unclear about any of the information in this documentation, or if you require further information, please contact SEW-EURODRIVE.

	NOTE
	Observe the information about the other modules of a MOVIAXIS® axis system in the "MOVIAXIS® MX Multi-Axis Servo Inverter" operating instructions when installing, starting up, and operating the 10 kW supply module with integrated braking resistor.

2.1 General information

Never install damaged products and put them into operation. Submit a complaint to the shipping company immediately in the event of damage.

During operation, multi-axis servo inverters can have live, bare and movable or rotating parts as well as hot surfaces, depending on their enclosure.

Removing covers without authorization, improper use as well as incorrect installation or operation may result in severe injuries to persons or damage to property.

Refer to the documentation for more information.

2.2 Target group

Only qualified personnel is authorized to install, startup or service the units or correct unit faults (observing IEC 60364 or CENELEC HD 384 or DIN VDE 0100 and IEC 60664 or DIN VDE 0110 as well as national accident prevention guidelines).

Qualified electricians in the context of these basic safety notes are persons familiar with installation, assembly, startup and operation of the product who possess the required qualifications.

Any activities regarding transportation, storage, operation, and disposal must be carried out by persons who have been instructed appropriately.

2.3 Designated use

The 10 kW supply module with integrated braking resistor is intended for installation into the unit system of MOVIAXIS® MX multi-axis servo inverters.

The MOVIAXIS® MX multi-axis servo drives are units for use in industrial and commercial systems to operate permanent-field synchronous AC motors and asynchronous AC motors with encoder feedback. These motors must be suitable for operation with servo inverters. Connect other loads to the units only after you have consulted the manufacturer.



The MOVIAXIS® MX multi-axis servo drives are intended for use in metal control cabinets. These metal control cabinets represent the necessary enclosure for the application as well as the grounding over a large area required for EMC purposes.

For installation in machines, startup of the multi-axis servo inverter (meaning the start of designated use) is prohibited until it is determined that the machine meets the requirements stipulated in the EC Directive 98/37/EC (machine directive); observe EN 60204.

Startup (i.e. the start of designated use) is only permitted under observance of the EMC directive (89/336/EEC).

The multi-axis servo inverters meet the requirements stipulated in the low voltage guideline 2006/95/EC. The harmonized standards of the EN 61800-5-1/DIN VDE T105 series in connection with EN 60439-1/VDE 0660 part 500 and EN 60146/VDE 0558 are applied to these multi-axis servo inverters.

Technical data and information on the connection requirements are provided on the nameplate and in the documentation; these must be observed under all circumstances.

Safety functions

MOVIAXIS® multi-axis servo inverters may not take on safety functions without a higher-level safety system. Use higher-level safety systems to ensure protection of equipment and personnel.

For safety applications, refer to the information in the following publications:

- Safe Disconnection for MOVIAXIS® – Conditions.
- Safe Disconnection for MOVIAXIS® – Applications.

2.4 Transportation, storage

You must observe the notes on transportation, storage and proper handling. Observe the climatic conditions as stated in the "MOVIAXIS® Multi-Axis Servo Inverter" operating instructions in the "General technical data" chapter.

2.5 Installation

The units must be installed and cooled according to the regulations and specifications in the corresponding documentation.

Protect the multi-axis servo inverters from excessive strain. Ensure that components are not deformed and/or insulation spaces are maintained, particularly during transportation. Avoid contact with electronic components and contacts.

Multi-axis servo inverters contain components that can be damaged by electrostatic energy and could be destroyed in case of improper handling. Prevent mechanical damage or destruction of electric components (may pose health risk).



The following applications are prohibited unless the unit is explicitly designed for such use:

- Use in potentially explosive areas.
- Use in areas exposed to harmful oils, acids, gases, vapors, dust, radiation, etc.
- Use in non-stationary applications which are subject to mechanical vibration and impact loads in excess of the requirements in EN 61800-5-1.

2.6 Electrical connection

Observe the applicable national accident prevention guidelines when working on live multi-axis servo inverters (for example, BGV A3).

Perform electrical installation according to the pertinent regulations (e.g. cable cross sections, fusing, protective conductor connection). Additional information is contained in the documentation.

You will find notes on EMC-compliant installation, such as shielding, grounding, arrangement of filters and routing of lines, in the documentation of the multi-axis servo inverters. Always observe these notes even with multi-axis servo inverters bearing the CE marking. The manufacturer of the system or machine is responsible for maintaining the limits established by EMC legislation.

Protective measures and protection devices must comply with the regulations in force (e.g. EN 60204 or EN 61800-5-1).

Required preventive measure: grounding the unit.

2.7 Safe disconnection

MOVIAXIS[®] meets all requirements for safe disconnection of power and electronic connections in accordance with EN 61800-5-1. All connected circuits must also satisfy the requirements for safe disconnection.

2.8 Operation

Systems with multi-axis servo inverters must be equipped with additional monitoring and protection devices, as applicable, according to the relevant safety guidelines and regulations, such as legislation governing technical equipment, accident prevention regulations, etc. Changes to the multi-axis servo inverter using the software are permitted.

Do not touch live components or power connections immediately after disconnecting the multi-axis servo inverters from the supply voltage because there may still be some charged capacitors. Note the respective labels on the multi-axis servo inverter.

Keep all covers and doors closed during operation.

The fact that the status LED and other display elements are no longer illuminated does not indicate that the unit has been disconnected from the mains and no longer carries any voltage.

Mechanical blocking or internal safety functions of the unit can cause a motor standstill. Eliminating the cause of the problem or performing a reset may result in the drive re-starting automatically. If, for safety reasons, this is not permitted for the driven machine, disconnect the unit from the mains before correcting the fault.



3 Unit Design

3.1 Important notes

Protective measures and **protective equipment** have to meet the respective national regulations in effect.

	<p>NOTE</p> <p>Follow the specific operating instructions during installation and startup of the motor and the brake!</p>
	<p>WARNING!</p> <p>The following "Unit design" illustrations show the units without the provided protection cover (touch guard). The protection cover protects the area of the mains and braking resistor connections.</p> <p>Uncovered power connections.</p> <p>Severe or fatal injuries from electric shock.</p> <ul style="list-style-type: none"> • Install the touch guard according to the regulations. • Never start the unit if the touch guard is not installed.

3.2 Nameplates, unit designations

Nameplate of a 10 kW supply module with integrated braking resistor

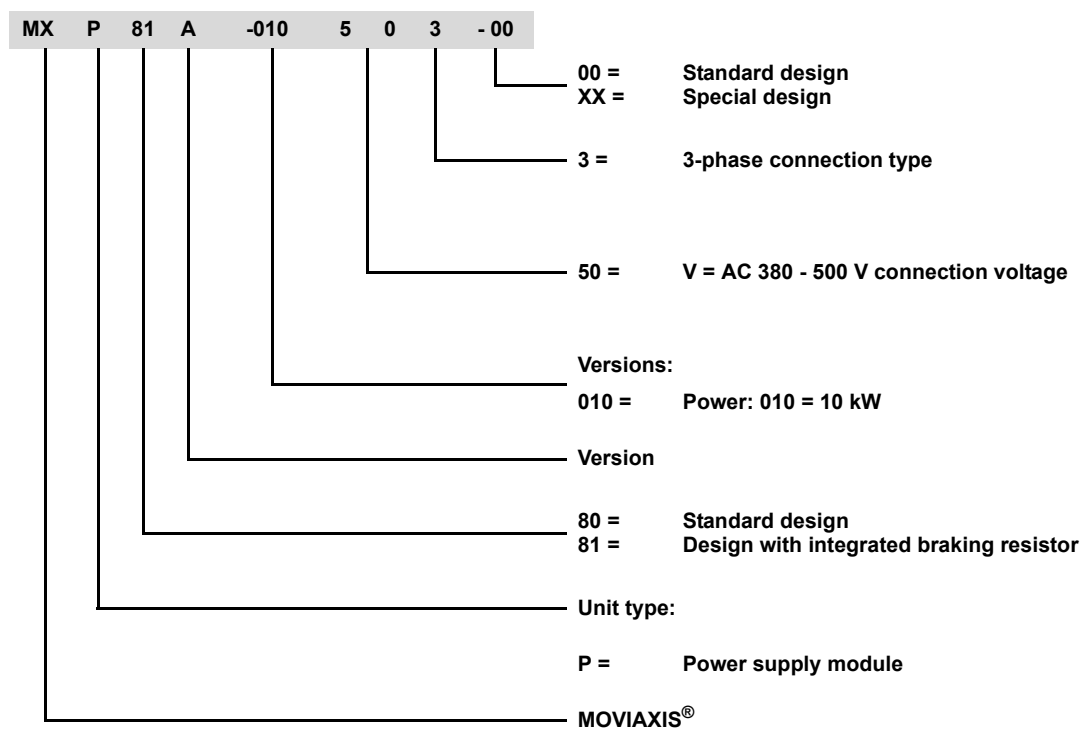
Typ: MXP81A-010-503-00	
SO#: 01.0017353001.0001.05	
Status: -- -- 55 51 -- -- -- 52	
MXP81A-010-503-00	
SEW EURODRIVE	
D-76646 Bruchsal	
Versorgungsmodul	
Supply module	
Made in Germany	
MOVIAxis SO#: 01.0017353001.0001.05 Eingang / Input U = 3x380-500V AC +/-10% I = 15 A AC P = 10 kW f = 50...60Hz T = 0...45°C Ausgang / Output U = 560V DC I = 18 A (400V) I _{br} = 45 A (400V) P _{RI} = 220 W IP 20	
Status: -- -- 55 51 -- -- -- 52	
LISTED IND. CONT. EQ. 2D06	

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Figure 1: Example nameplate of a 10 kW supply module with integrated braking resistor



Unit designation





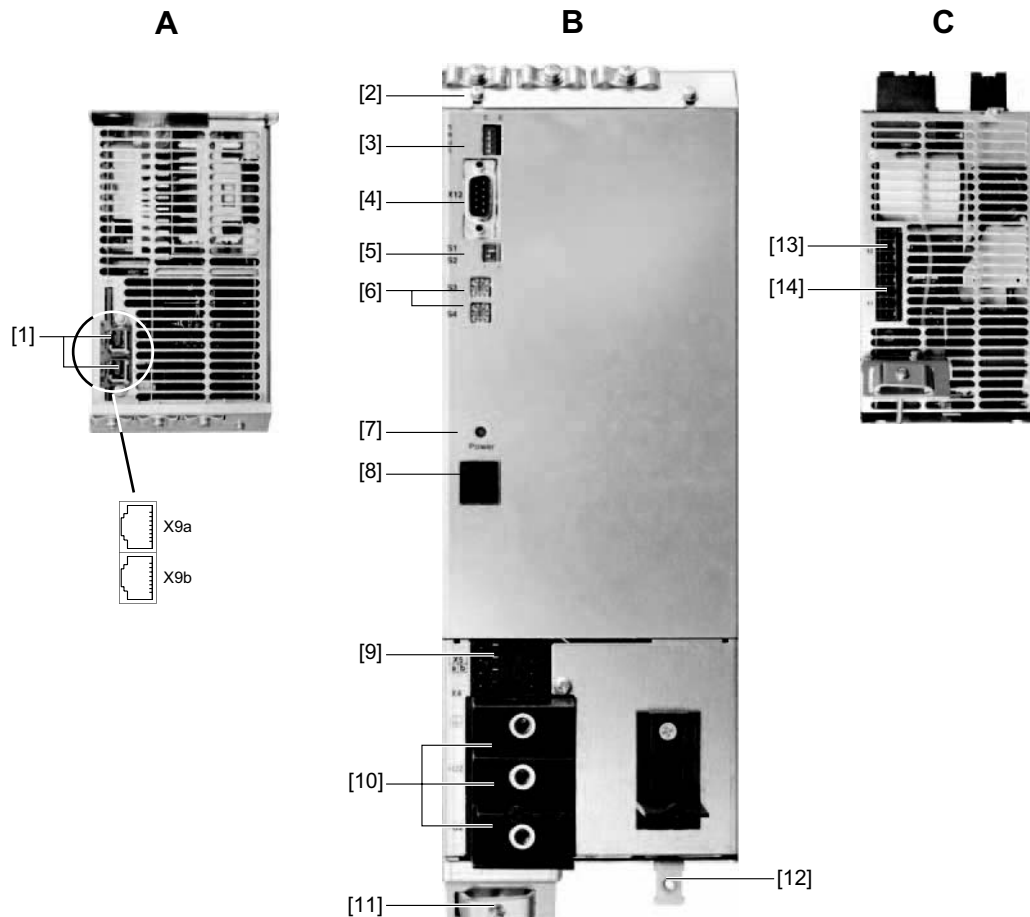
Unit Design

Unit design of a 10 kW supply module with integrated braking resistor

3.3 Unit design of a 10 kW supply module with integrated braking resistor

The following illustration shows the unit without protective cover.

10 kW supply module with integrated braking resistor



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Figure 2: Unit design of a 10 kW supply module with integrated braking resistor

A View from top

- [1] Signaling bus
X9a: Input, green plug on cable
X9b: Output, red plug on cable

B View from front

- [2] Electronics shield clamps

[3] C, E: DIP switches
- C: CAN-based system bus
- E: EtherCAT-based system bus
[4] X12: CAN system bus
[5] S1, S2: DIP switch for CAN baud rate
[6] S3, S4: Axis address switch
[7] Standby display (Power)
[8] 2 x 7-segment display
[9] X5a, X5b: 24 V voltage supply
[10] X4: DC link connection
[11] Power shield clamp
[12] Housing grounding point


C View from bottom

- [13] X3: Socket for emergency braking resistor (optional)
[14] X1: Power supply connection




4 Installation

4.1 Mechanical Installation

	<p>⚠ CAUTION!</p> <p>Do not install defective or damaged modules; they can possibly result in injuries or damage parts of the production system.</p> <ul style="list-style-type: none"> • Check the MOVIAXIS® MX multi-axis servo inverter modules prior to installing them for external damage and replace any damaged modules.
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- Check to make sure that the delivery is complete.

	<p>STOP!</p> <p>The mounting plate in the control cabinet must be conductive over a large area for the mounting surface of the servo inverter (pure metal, easily conductive). An EMC compliant installation of the MOVIAXIS® MX multi-axis servo drive can only be accomplished with a mounting plate that is conductive over a large area.</p>
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4.2 Installing/removing the supply module

Refer to the "MOVIAXIS® MX Multi-Axis Servo Inverter" operation instructions for a description how to install a module in an axis system and how to remove it. Adhere to the instructions for installing/removing a supply module.



4.3 Electrical installation



HAZARD!

Dangerous voltage levels may still be present inside the unit and at the terminal strips up to 10 minutes after the complete axis system has been disconnected from the mains.

Severe or fatal injuries from electric shock.

To prevent electric shocks:

- Disconnect the axis system from the mains and wait ten minutes before removing the protective covers.
- After maintenance work, do not operate the axis system unless you have replaced the protective cover because the unit only has degree of protection IP00 without protective cover.



HAZARD!

A leakage current $> 3.5 \text{ mA}$ can occur during operation of the MOVIAXIS® MX multi-axis servo inverter.

Severe or fatal injuries from electric shock.

To prevent electric shock:

- With supply system lead $< 10 \text{ mm}^2$, route a second PE conductor with the same cross section as the supply system lead via separate terminals. Alternatively, you can use a PE conductor with a copper cross section $\geq 10 \text{ mm}^2$ or aluminum $\geq 16 \text{ mm}^2$.
- With incoming supply line $\geq 10 \text{ mm}^2$, it is sufficient to install a PE conductor with a cross section copper $\geq 10 \text{ mm}^2$ or aluminum $\geq 16 \text{ mm}^2$.
- If an earth leakage circuit breaker can be used for protection against direct and indirect contact, it must be universal current sensitive (RCD type B).



NOTE

Installation with reliable isolation.

The unit meets all requirements for reliable isolation between power and electronic connections according to EN 61800-5-1. The connected signal circuits have to meet the requirements according to SELV (**S**afe **E**xtremely **L**ow **V**oltage) or PELV (**P**rotective **E**xtra **L**ow **V**oltage) to ensure reliable isolation. The installation must meet the requirements for reliable isolation.



Permitted voltage systems

- MOVIAxis® is intended for operation on voltage supply systems with a directly grounded star point (TN and TT power systems). Operation on voltage supply systems with a non-grounded star point (for example IT power systems) is permitted. In such a case, SEW-EURODRIVE recommends using earth-leakage monitors employing pulse-code measurement. Use of such devices prevents the earth-leakage monitor mis-tripping due to the earth capacitance of the servo inverter.
- No EMC limits are specified for interference emission in voltage supply systems without a grounded star point (IT systems). The efficiency of line filters is severely limited.



4.4 Wiring diagrams

General information on wiring diagrams

- For technical data of the connections of power electronics and control electronics, refer to the "Technical Data" chapter.
- All units within the axis system have to be connected to each other via the DC link bus connection (PE, + U_z , - U_z), the 24 V voltage supply (X5a, X5b) and the signaling bus (X9a, X9b).

Example connection of a supply module with integrated braking resistor

Wiring of power terminals

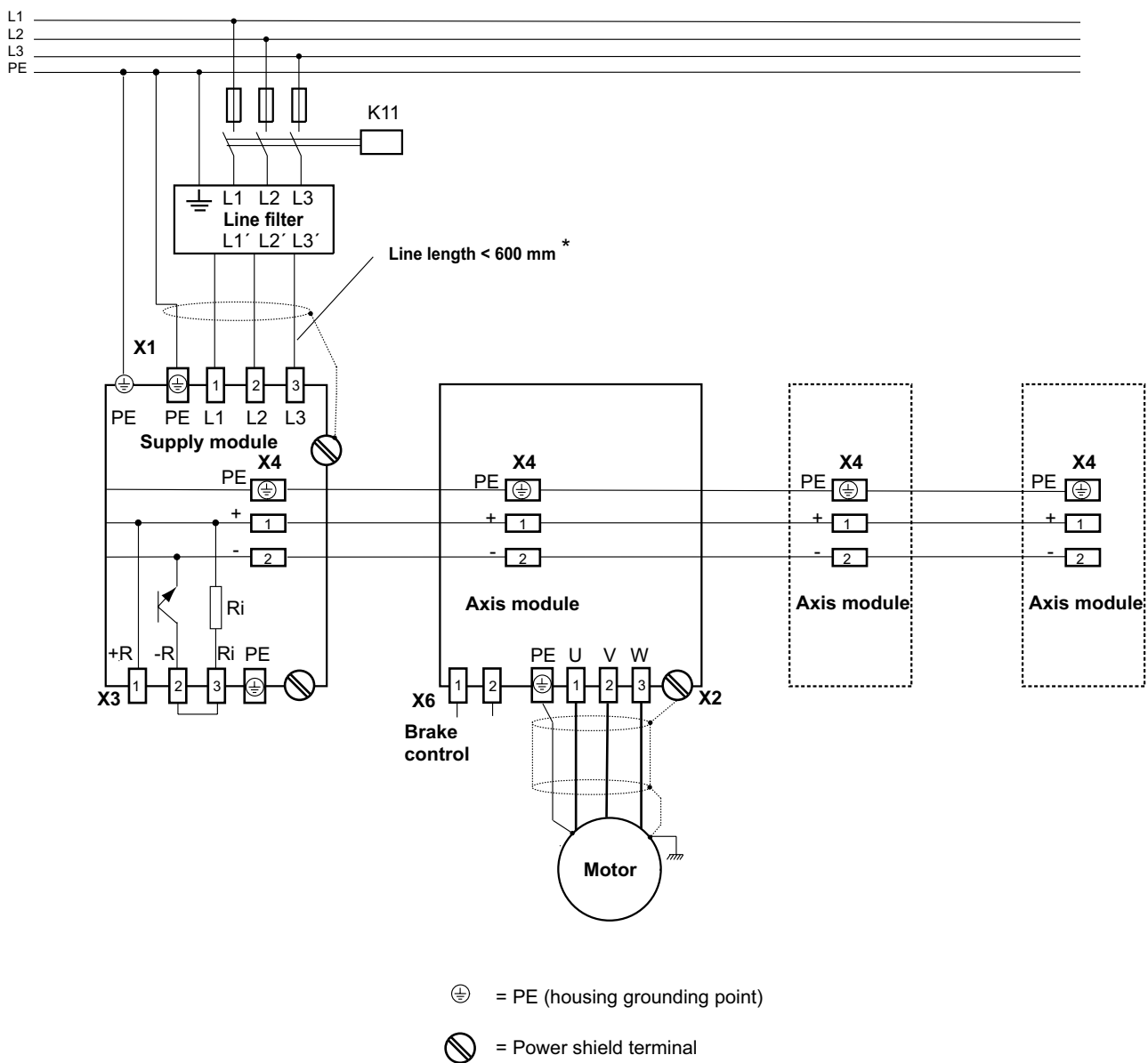
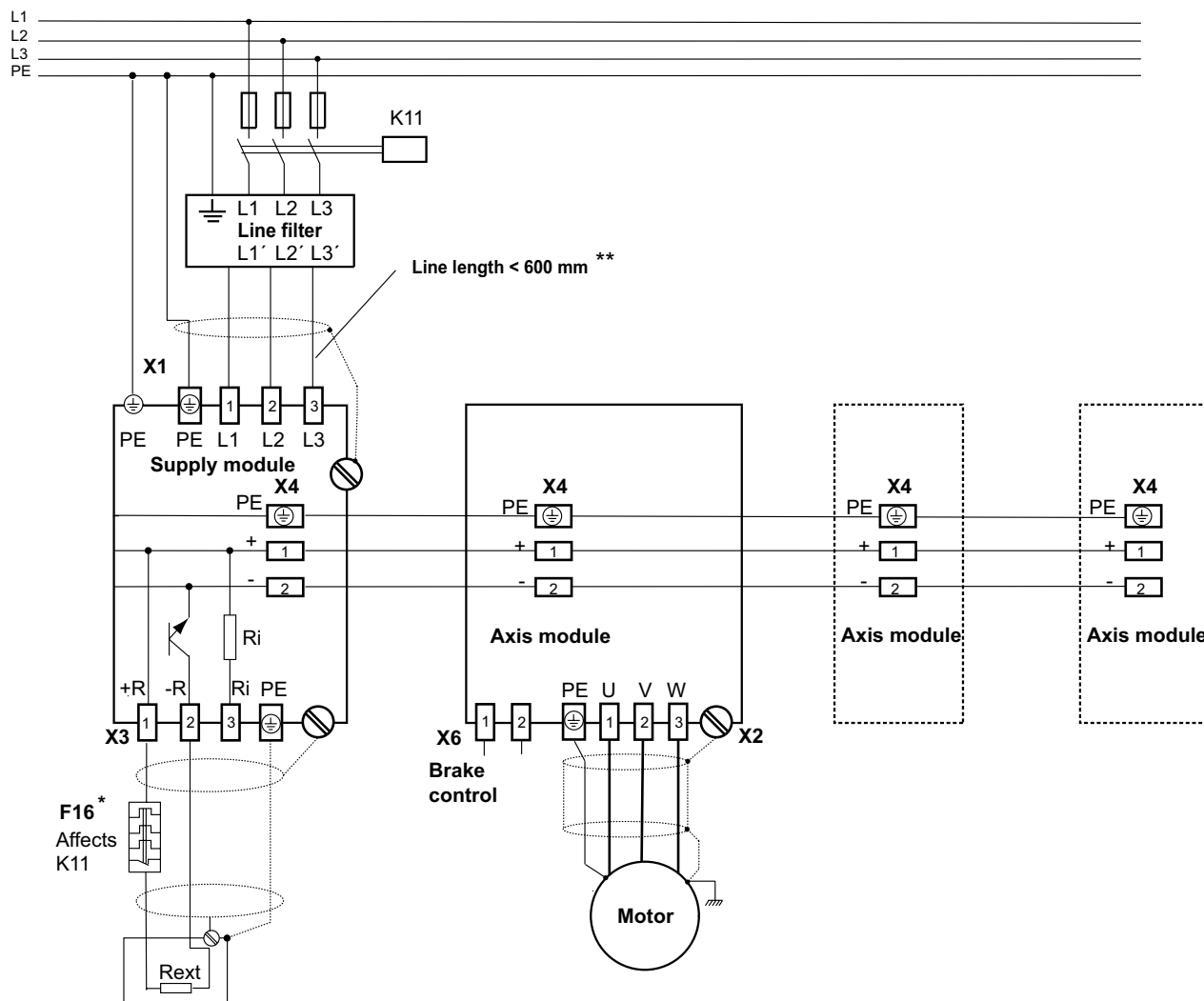


Figure 3: Example wiring diagram of MOVIAxis® supply module with integrated braking resistor

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* For shielding and cable length, refer to the "MOVIAxis® MX Multi-Axis Servo Inverter" operating instructions in the chapter "Notes on electromagnetic compatibility".



 = Power shield terminal

Figure 4: Example wiring diagram of MOVIAxis[®] supply module with external braking resistor (optional)

**** For shielding and cable length, refer to the "MOVIAXIS® MX Multi-Axis Servo Inverter" operating instructions in the chapter "Notes on electromagnetic compatibility".**



When using an external braking resistor R_{ext} , the jumper between terminals X3/2 and X3/3 **must** be removed.



Wiring the control electronics

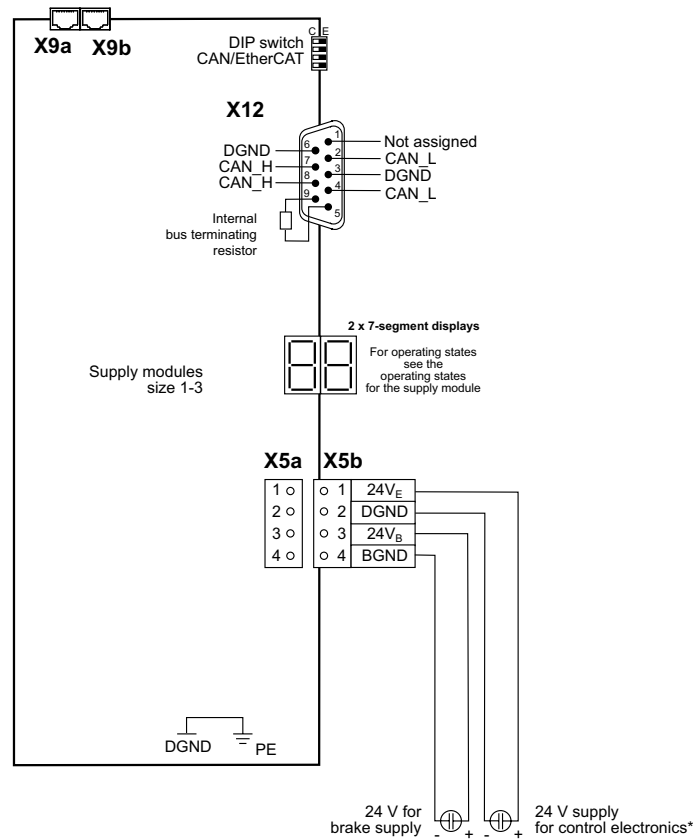


Figure 5: Wiring diagram of the MOVIAxis[®] MXP supply module control electronics

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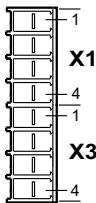

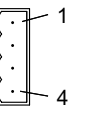
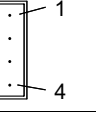
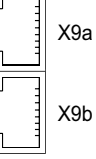
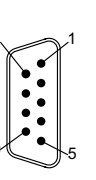
* Connection via supplied pre-fabricated cables.

X9a Signal bus input

X9b Signal bus output



4.5 Terminal assignment


	Terminal	Assignment	Brief description
	X1:1 X1:2 X1:3 X1:4	PE L1 L2 L3	Power supply connection (BG1 / 10 kW))
	X3:1 X3:2 X3:3 X3:4	+R -R Ri PE	
	X4:PE X4:1 X4:2	PE +U _Z -U _Z	DC link bus connection
	X5a:1 X5a:2	+24 V _E DGND	Voltage supply for electronics
	X5a:3 X5a:4	+24 V _B BGND	Voltage supply for brake supply
	X5b:1 X5b:2	+24 V _E DGND	Voltage supply for electronics
	X5b:3 X5b:4	+24 V _B BGND	Voltage supply for brake supply
	X9a X9b		a = Input: Signal bus, with green plug b = Output: Signal bus, with red plug
	X12:1 X12:2 X12:3 X12:4 X12:5 X12:6 X12:7 X12:8 X12:9	n.c. CAN_L DGND CAN_L R _{termination} DGND CAN_H CAN_H R _{termination}	CAN bus low Reference potential CAN bus CAN bus low Unit internal SBus terminating resistor Reference potential CAN bus CAN bus high CAN bus high Unit internal SBus terminating resistor

1) Only for CAN-based system bus. No function for EtherCAT-based system bus.



5 Startup

5.1 General information


	<p>HAZARD!</p> <p>Uncovered power connections. Severe or fatal injuries from electric shock.</p> <ul style="list-style-type: none"> • Install the touch guard according to the regulations. • Never start the unit if the touch guard is not installed.
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Prerequisite

The drive must be configured correctly to ensure that startup is successful. Refer to the MOVIAXIS® MX project planning manual for detailed project planning notes and an explanation of the parameters.

For starting up the entire axis system, observe chapter "Startup" in the "MOVIAXIS® MX Multi-Axis Servo Inverter" operating instructions.

Mains connection of axis system

	<p>STOP!</p> <ul style="list-style-type: none"> • Observe a minimum switch-off time of 10 s for the relay K11. • Do not turn the mains supply on or off more than once per minute! <p>Irreparable damage to the unit or unforeseeable malfunctions. The specified times and intervals must be observed.</p>
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5.2 Supply module settings for a CAN-based system bus

The following settings are necessary:

- The 4 DIP switches for setting the system bus are set to "C".
- The CAN baud rate is set using the two DIP switches S1 and S2 on the supply module, see section "Assigning the CAN baud rate" in the "MOVIAXIS® Multi-Axis Servo Inverter" operating instructions.
- The axis address is set using the two address switches S3 and S4 on the supply module, see section "Assigning the axis address for CAN" in the "MOVIAXIS® Multi-Axis Servo Inverter" operating instructions. The next axis address will be set automatically based on the first address.

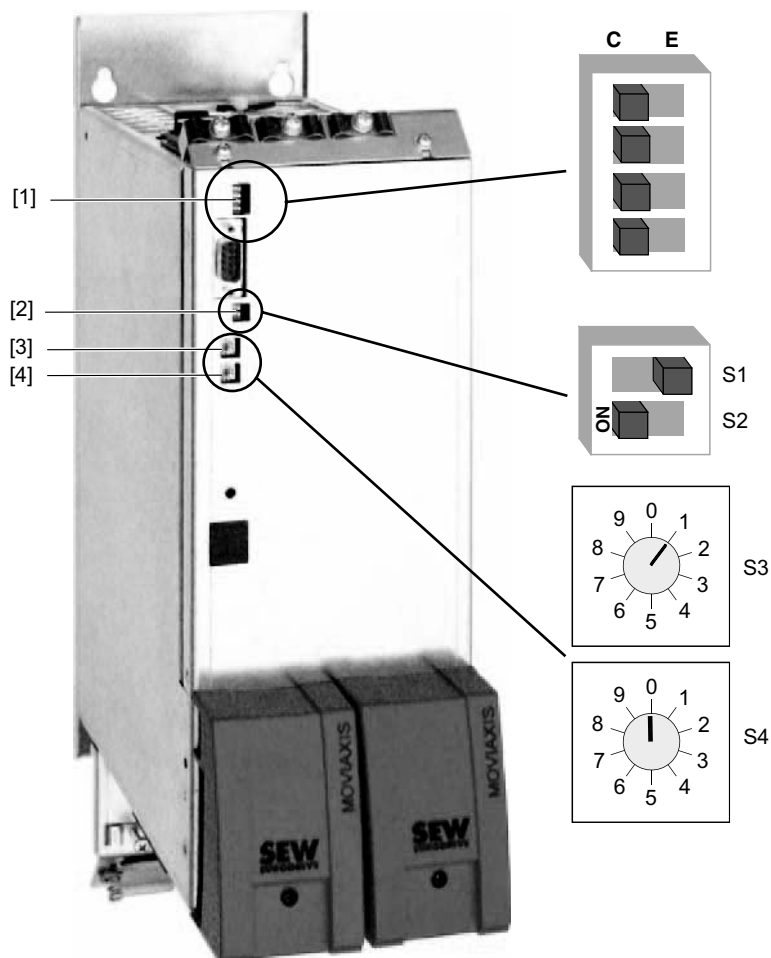


Figure 6: DIP switches and axis address switch on the supply module

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- [1] DIP switches system bus
- [2] S1, S2: DIP switch for CAN baud rate
- [3] S3: Axis address switch 10^0
- [4] S4: Axis address switch 10^1



5.3 Settings for EtherCAT-based system bus

Please note the following when using an EtherCAT-based system bus:

- Set the 4 DIP switches on the supply module to position "E".
- In this variant, switches S1, S2, S3 and S4 on the supply module do not have any function.
- Set the DIP switch LAM to **setting "1"** at the **last** axis module in the system. In all other axis modules, the LAM DIP switch is set to "0" position, see "MOVIAXIS® Multi-Axis Servo Inverter" operating instructions in chapter "Settings with EtherCAT-based system bus".

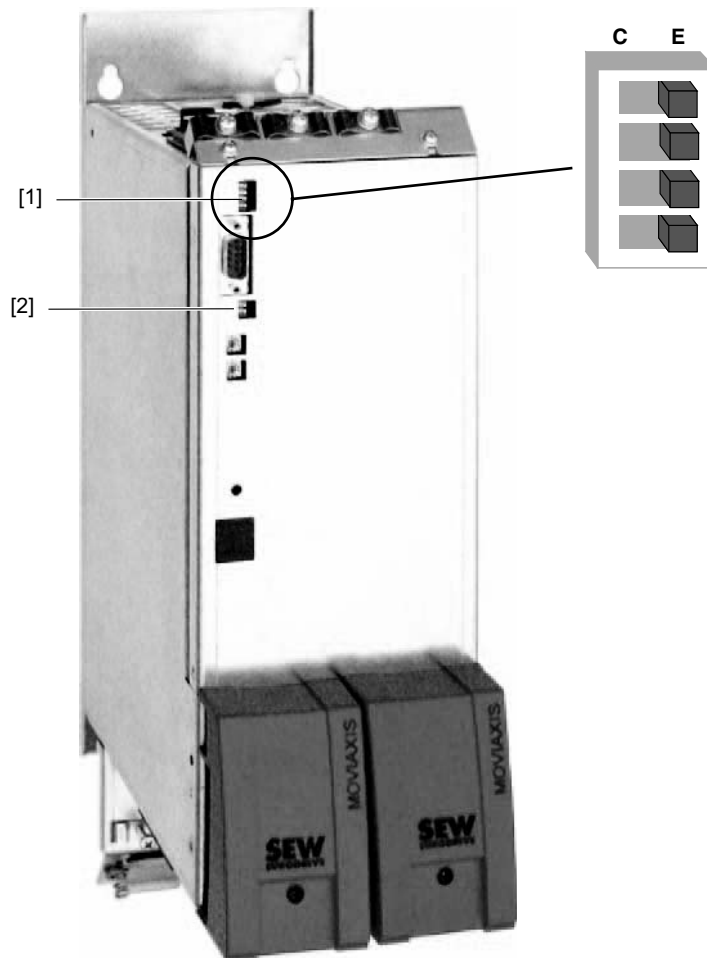


Figure 7: DIP switch settings on the supply module

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- [1] Settings for EtherCAT operation: All 4 switches set to "E"
- [2] DIP switches S1, S2, S3 and S4 and X12 have no functions



6 Operation

6.1 General information

	<p>HAZARD!</p> <p>Dangerous voltages at cables and motor terminals Severe or fatal injuries from electric shock.</p> <ul style="list-style-type: none"> When the unit switch is in the ON position, dangerous voltages are present at the output terminals as well as any connected cables. This also applies even when the unit is inhibited and the motor is at standstill. If the operation LED on a module is no longer illuminated, this does not indicate that the module has been disconnected from the power supply and no longer carries any voltage. Before you touch the power terminals, check to see that the MXP81A supply module is disconnected from the power supply. Observe the general safety notes in chapter 2 as well as the safety notes in the "MOVIAXIS® Multi-Axis Servo Inverter" operating instructions.
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	<p>NOTE</p> <p>Noise may occur due to charging and discharging of unit-internal capacities. The noise does not influence the functionality of the MXP81A supply module.</p>
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	<p>NOTE</p> <p>Observe the various operating conditions in the "Project Planning" chapter when switching on the supply module.</p>
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6.2 Operating displays and errors of the MXP supply module

Table of displays

	Description	Status	Comment / action	Display on the axis module
Displays during standard operation				
	Ready for operation (ready)	No error/warning. $U_z = > 100 \text{ V}$.	Status display only.	-
Displays of diverse unit states				
	DC link voltage missing or less than 100 V.	No error/warning. $U_z = > 100 \text{ V}$.	Check mains.	X
Displays in case of warnings				
	I^2_{xt} prewarning.	Utilization of the supply module has reached the prewarning level.	Check application regarding utilization.	P
	Temperature prewarning.	The temperature of the supply module is approaching the cut-off threshold.	Check application regarding utilization, check ambient temperature.	P
	Prewarning: Utilization of internal braking resistor $\geq 80\%$	Unit is ready for operation	Check unit utilization / project planning	-



Table of errors

	Description	Status	Comment / action	Display on the axis module
Displays in case of an error				
04	Brake chopper error.	Brake chopper is not ready for operation.	See error list of axis modules.	X
07	Error excessive DC link voltage U_z .	Error message by supply module via signaling bus when DC link voltage is too high.	Check application design and braking resistor.	X
81	Error excessive DC link current.	The DC link current in the supply module has exceeded the maximum limit of 250 % I_{rated} .	Check application regarding utilization.	X
83	Error I^2xt monitoring.	Utilization of the supply module has reached the limit value.	Check application regarding utilization.	X
86	Temperature monitoring error.	Temperature of the supply module has reached the switch-off threshold.	Check application regarding utilization, check ambient temperature.	X
88	Switch-off due to internal braking resistor overload	The unit is not ready for operation any longer	Check unit utilization / project planning	x
89	Error voltage supply (switched-mode power supply module inside unit).	A supply voltage inside the unit is defective.	Check connected loads for overcurrent or unit for defects.	-
90	Thermal overload of the additional capacity	Additional capacity at full capacity. Error response only depending on the settings made for the axis modules.	Braking resistor converts regenerative energy into heat. Check unit utilization / project planning	x
91	Error voltage supply (switched-mode power supply module inside unit).	A supply voltage inside the unit is defective.	Check connected loads for overcurrent or unit for defects.	-



7 Project Planning

	NOTE
	Please contact SEW-EURODRIVE for project planning of a 10 kW supply module with integrated braking resistor.

7.1 Various operating conditions

The MXP81A supply module is capable of converting an effective regenerative power of 220 W. The regenerative peak energies that can be processed permanently depend on two operating conditions. Observe the following operating conditions for project planning.

Operating condition 1 – Operation under constant load

The internal braking resistor can absorb peak energy pulses of 11 kW. There are no restrictions in terms of delay or wait times after power on or off.

Operating condition 2 – Operation under maximum load

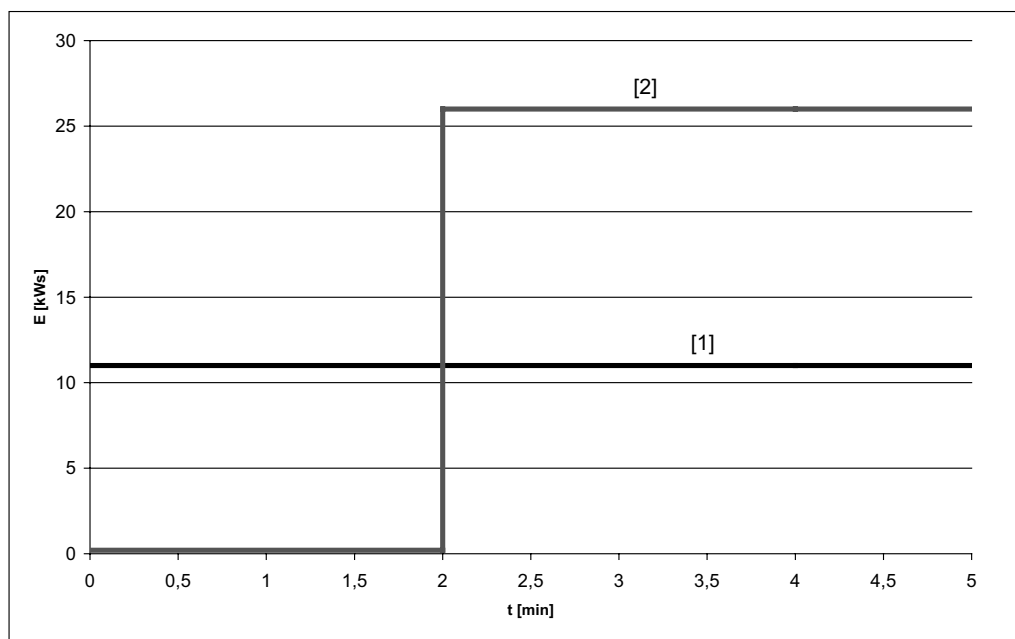
After switching on the DC 24 V (also after switching on following an operation phase), there is a wait time of 2 minutes. Afterwards, peak energy pulses of 26 kW can be absorbed.

If the DC 24 V supply is interrupted during the two minutes, there will be another wait time of 2 minutes after switching on.

The regulations of the mains connection frequency (see "MOVIAXIS® Multi-Axis Servo Inverter" operating instructions) apply for the reconnection frequency of the DC 24 V supply.

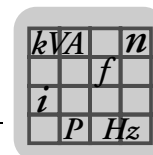


The following diagram explains the two operating conditions:



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- [1] Operating condition 1: With braking resistor load directly after switching on E [kW]
- [2] Operating condition 2: With braking resistor load after a wait time of 2 minutes E [kW]



8 Technical Data

8.1 Technical data of the supply module

Power component supply module

MOVIAXIS® supply module MXP80A-...-503-00	1)	2)	Size 1
Type			010
INPUT			
Supply voltage AC V_{mains}	U	V	3 × 380 V ... 3 × 500 V
Rated mains current ⁴⁾ AC I_{mains}	I	A	15
Rated power P_N	P	kW	10
Mains frequency f_{mains}	f	Hz	50... 60 ±5%
Cross-section and contacts on connections		mm ²	COMBICON PC4 pluggable, max. 4
Cross-section and contacts on shield clamp		mm ²	max. 4 × 4
OUTPUT (DC LINK)			
Rated DC link voltage ³⁾ U_{NZK}	U	V	DC 560
Rated DC link current ⁴⁾ DC I_{NZK}	I	A	18
Max. DC link current DC $I_{\text{ZK max}}$	I_{max}	A	45
Overload capacity for max. 1 s			250 %
Brake chopper power		kW	Peak power: 250 % × P_N continuous power: 0.5 × P_N
Effective regenerative power capacity		kW	0.5 × P_N (with external braking resistor)
Cross section ⁵⁾ and contacts		mm	CU rails 3 × 14 mm, M6 screw fitting
ADDITIONAL CAPACITY DC LINK			
Rated DC link voltage	U	V	DC 560
Storable energy	W	Ws	250
Peak power capacity	P	kW	20
Rated capacity	C	μF	1000
INTERNAL BRAKING RESISTOR			
Effective braking power	P_{eff}	W	220
Maximum braking power	P_{max}	kW	26

Table continued on next page. Footnotes on next page.



Technical Data

Technical data of the supply module

MOVIAXIS® supply module MXP80A-...-503-00	1)	2)	Size 1
BRAKING RESISTOR (external)			
Minimum permitted braking resistor value R (4-Q operation)		Ω	26
Cross-section and contacts on connections		mm ²	COMBICON PC4 pluggable, max. 4
Cross-section and contacts on shield clamp		mm ²	max. 4 × 4
GENERAL			
Power loss at nominal capacity		W	30
Weight		kg	4.2
Dimensions:	W	mm	120
	H	mm	300
	D	mm	254

1) Nameplate information

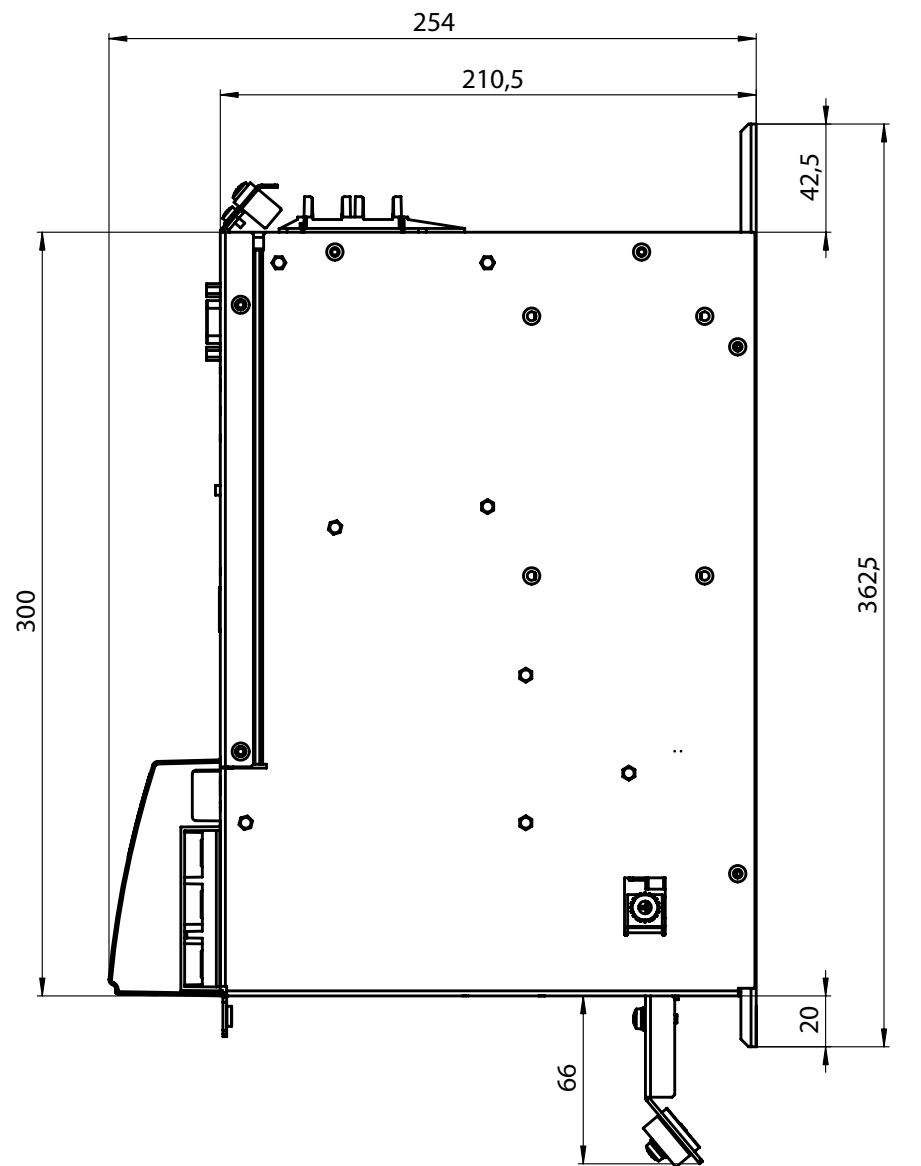
2) Unit

3) The system and output currents must be reduced by 20 % from the nominal values for $V_{\text{mains}} = 3 \times \text{AC } 500 \text{ V}$.

4) Decisive value for planning the assignment of supply and axis modules

5) Material thickness [mm] × width [mm]

8.2 Dimension drawing



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Figure 8: Dimensions of supply module BG1

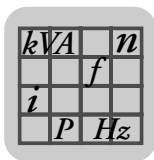
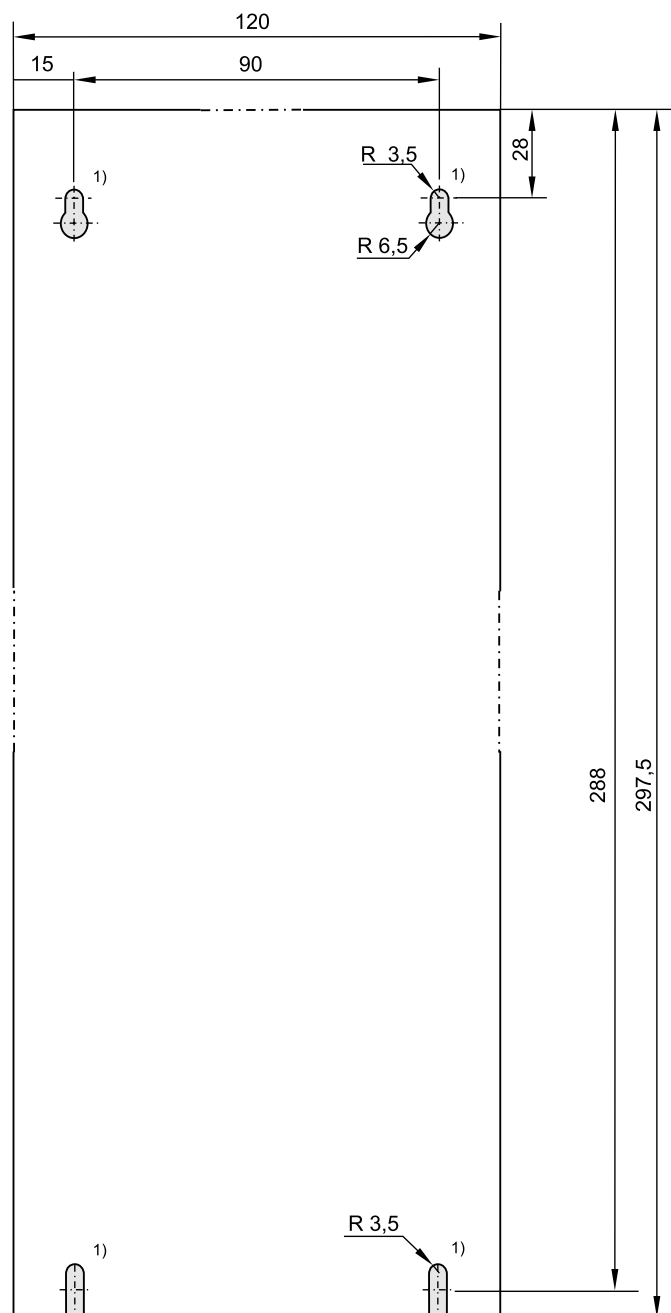
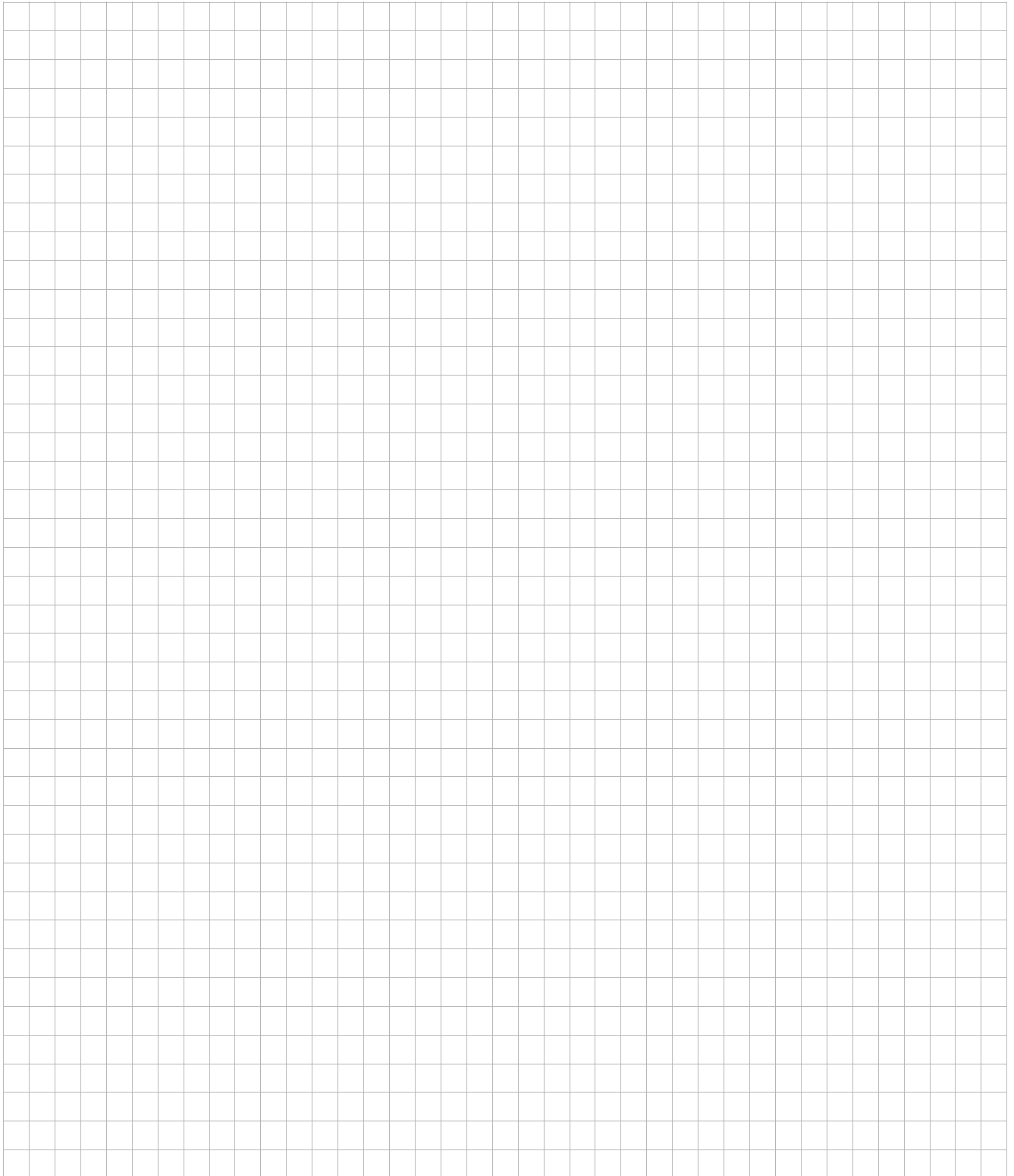

Housing rear view MXP81


Figure 9: Drilling template

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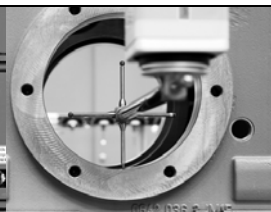
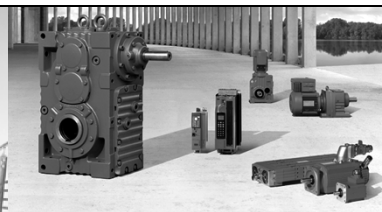
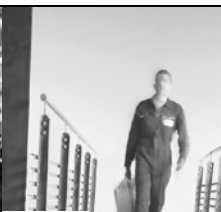
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