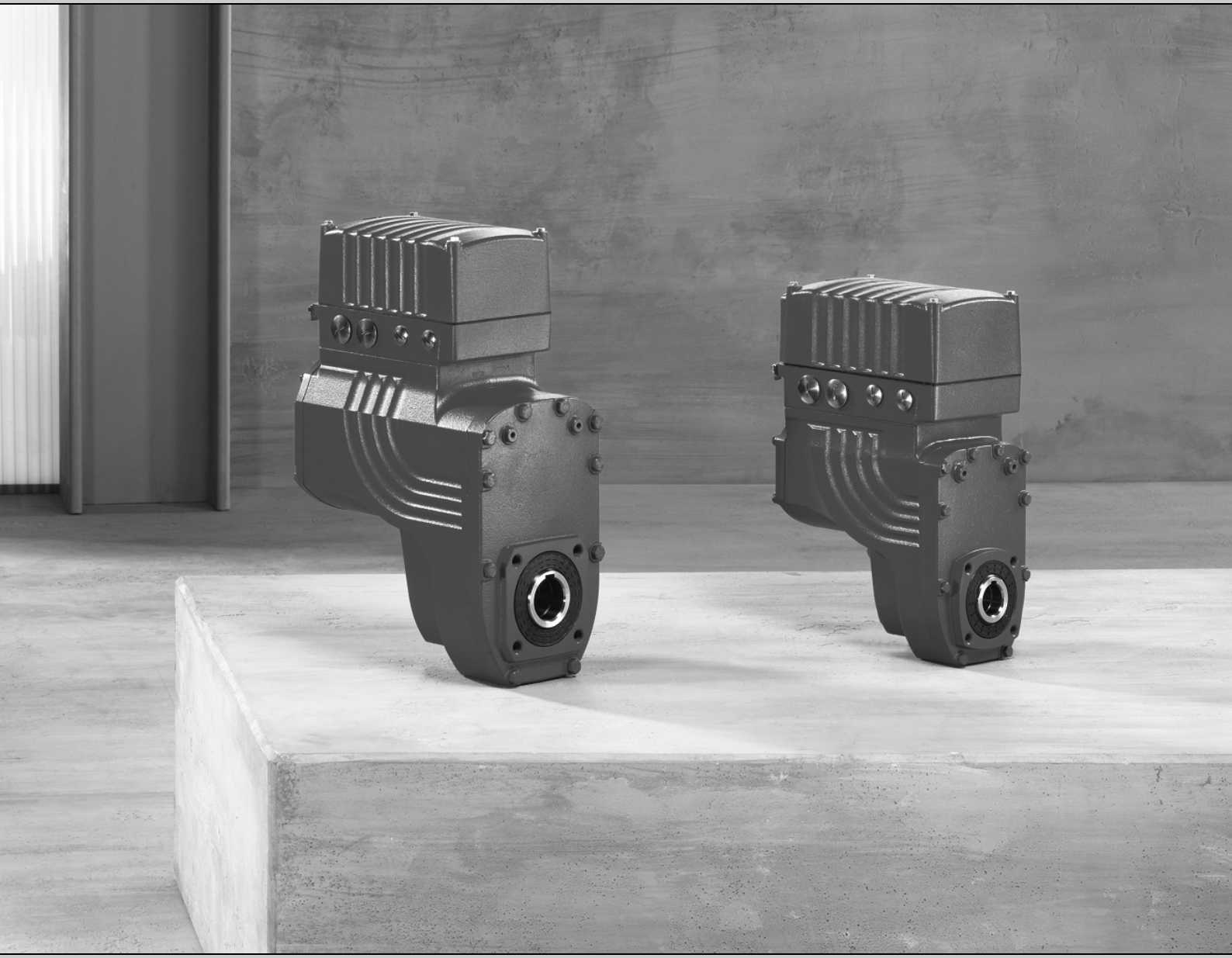
SEW EURODRIVE

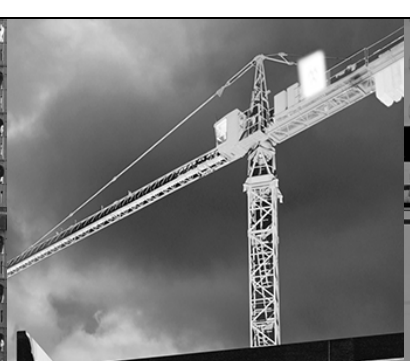
Manual



Mechatronisches Drive System
MOVIGEAR® B
Functional Safety

Edition 10/2010

17008026 / EN




KKFU 144794 3
42G1

Contents

1 Important Information

1.1 About this manual

The manual is part of the product and contains important information about installation, startup, operation and service. The manual is written for everyone installing, starting up or servicing this product.

The manual must be accessible and legible. 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 manual carefully and understood it. If you are unclear about any of the information in this documentation, or if you require further information, contact SEW-EURODRIVE.

1.2 Structure of the safety notes

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

Pictogram	SIGNAL WORD
	Type and source of danger. Possible consequence(s) if disregarded. • Measure(s) to prevent the danger.

Pictogram	Signal word	Meaning	Consequences if disregarded
Example:  General danger  Specific danger, e.g. electric shock	DANGER	Imminent danger	Severe or fatal injuries
	WARNING	Possible dangerous situation	Severe or fatal injuries
	CAUTION	Possible dangerous situation	Minor injuries
	NOTICE	Possible damage to property	Damage to the drive system or its environment
	INFORMATION	Useful information or tip. Simplifies the handling of the drive system.	

1.3 Rights to claim under limited warranty

A requirement of fault-free operation and fulfillment of any right to claim under limited warranty is that you adhere to the information in the MOVIGEAR® documentation. Therefore, read the operating instructions before you start working with the unit.

Make sure that the documentation is 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.

1.4 Exclusion of liability

You must comply with the information contained in the MOVIGEAR® documentation to ensure safe operation of MOVIGEAR® 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 the documentation. In such cases, any liability for defects is excluded.

1.5 Copyright notice

© 2010 – SEW-EURODRIVE. All rights reserved.

Copyright law prohibits the unauthorized duplication, modification, distribution, and use of this document, in whole or in part.

1.6 Content of this publication

This publication contains conditions and amendments related to MOVIGEAR® in safety-oriented applications.

The system includes the MOVIGEAR® unit consisting of a frequency inverter with synchronous motor and gear unit and the safety-tested, external switch-off device.

1.7 Applicable documentation

This document supplements the MOVIGEAR® B operating instructions and limits the application notes according to the following information.

It can only be used in conjunction with the following publications:

- The MOVIGEAR® B operating instructions must always be observed.

2 Integrated Safety Technology

The safety technology of MOVIGEAR® described below has been developed and tested in accordance with the following safety requirements:

- SIL 3 according to IEC 61800-5-2
- PL e according to EN ISO 13849-1

This was certified by TÜV Nord. Copies of the TÜV certificate and the corresponding report are available from SEW-EURODRIVE on request.

2.1 Safe condition

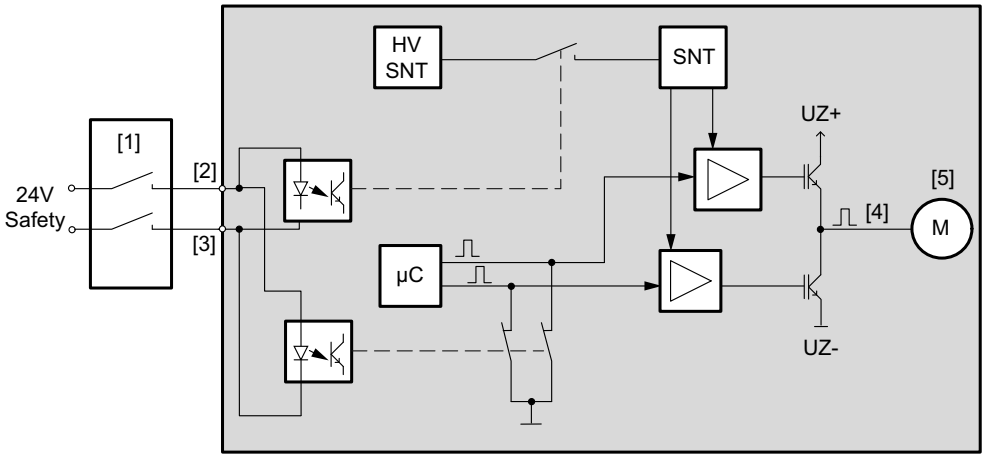
For safety-related operation of MOVIGEAR®, safe torque off is defined as safe condition (see STO safety function). The safety concept is based on this.

2.2 Safety concept

- The MOVIGEAR® drive unit can be connected to an external safety controller or safety relay. This disconnects the safety-related STO input via 2-pole 24 V switching signal when a connected control device (e.g. emergency stop button with latching function) is activated. This activates the STO function (safe disconnection) of MOVIGEAR®.
- An internal, dual-channel structure (1oo2) with diagnostics prevents the generation of pulse trains at the power output stage (IGBT) On the one hand, the internal supply voltage for controlling the upper and lower IGBTs is disconnected, and on the other hand the controlling pulse patterns are short-circuited. This means that the output stage can no longer supply power to the motor for generating torque.
- Instead of galvanic separation of the drive from the supply system by means of contactors or switches, the disconnection of the STO input described here safely prevents the control of the power semiconductors in the output stage. The rotary-field generation for the respective motor is deactivated even though the line voltage is still present.

2.2.1 Schematic illustration "Safety concept for MOVIGEAR®"

The following figure shows a schematic representation of the safety concept for MOVIGEAR®:



[1] Safety controller/safety relay external
[2] Connection "STO+"
[3] Connection "STO-"
[4] Motor phase
[5] Motor

2.3 Safety functions

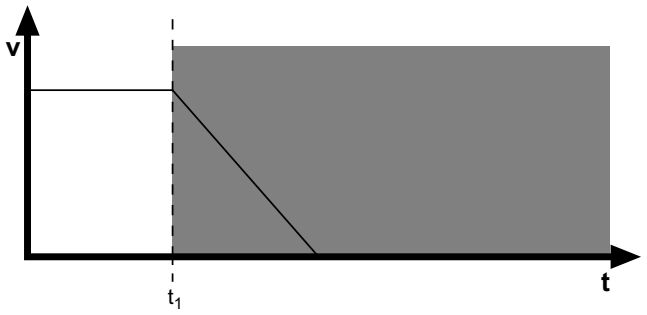
The following drive-related safety functions can be used:

- **STO** (safe torque off according to IEC 61800-5-2) through disconnection of the STO input.

  If the STO function is activated, the frequency inverter no longer supplies power to the motor for generating torque. This safety function corresponds to a non-controlled stop according to EN 60204-1, stop category 0.

  The STO input must be switched off by a suitable external safety controller or a suitable external safety relay.

  The following figure shows the STO function:



2463228171

v	Speed
t	Time
t_1	Time at which STO is triggered
	Disconnection range

- **SS1(c)** (Safe Stop 1, function variant c according to IEC 61800-5-2) through suitable external controller (e.g. safety relay with delayed switch-off).

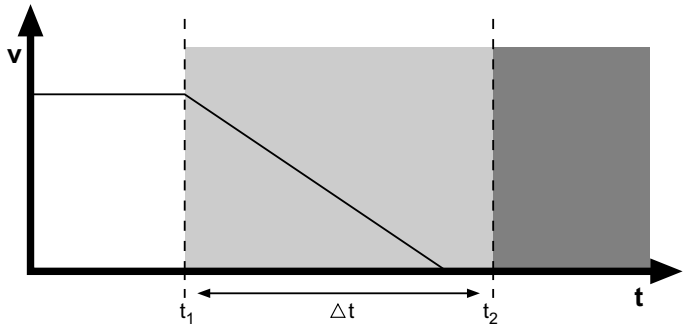
  The following sequence is mandatory:

  – Decelerate the drive using an appropriate brake ramp specified via setpoints.

  – Disconnect the STO input (= triggering the STO function) after a specified safety-related time delay.

  This safety function corresponds to a controlled stop according to EN 602041, stop category 1.

  The following figure illustrates the SS1(c) function:



2463226251

v	Speed
t	Time
t_1	Point of time when brake ramp is initiated
t_2	Point of time when STO is triggered
Δt	Time between initiating the brake ramp and STO
	Safe time delay range
	Disconnection range

2.4 Limitations

- MOVIGEAR® has no mechanical brake. This means coasting of the drive depends on the application (subject to friction and mass moment of inertia of the system). In case of regenerative loads, the drive can even accelerate. This must be taken into account for a risk assessment of the system/machine. Additional safety measures might have to be implemented (e.g. safety brake system).

  → MOVIGEAR® cannot be used without an additional brake system for application-specific safety functions that require active deceleration (braking) of the dangerous movement.

- When using the SS1(c) function as described in chapter "Safety functions", the brake ramp of the drive is not monitored with respect to safety. In case of a fault, the drive might not be decelerated after the delay time, or it might be accelerated in the worst case. In this case, the STO function (see chapter "Safety functions") is only activated after the set time delay has passed. The resulting danger must be taken into account for the risk assessment of the system/machine. Additional safety measures might have to be implemented.

⚠ DANGER

The safety concept is only suitable for performing mechanical work on the system/ machine components.

If the STO signal is disconnected, the supply system voltage is still present at the MOVIGEAR® DC link.

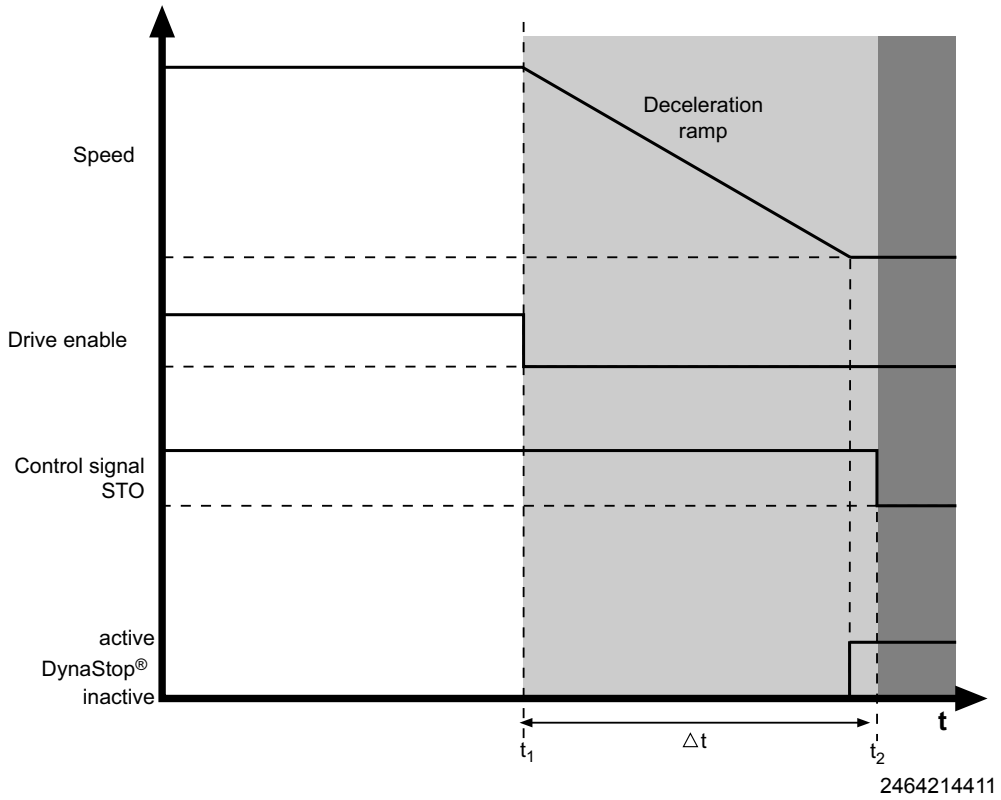
Severe or fatal injuries from electric shock.

- Before working on the electric part of the drive system, disconnect it from the supply system using an appropriate external disconnecting device and secure it against unintentional reconnection to the voltage supply.

2.4.1 Unit variants with DynaStop®

- The optional DynaStop® function is not safety-related. It is not part of the safety functions described in chapter "Safety functions".

  To use the DynaStop® function in connection with the STO function, we recommend control in line with SS1(c):



t	Time
t_1	Point of time when brake ramp is initiated
t_2	Point of time when STO is triggered
Δt	Time between initiating the brake ramp and STO
	Safe time delay range
	Disconnection range

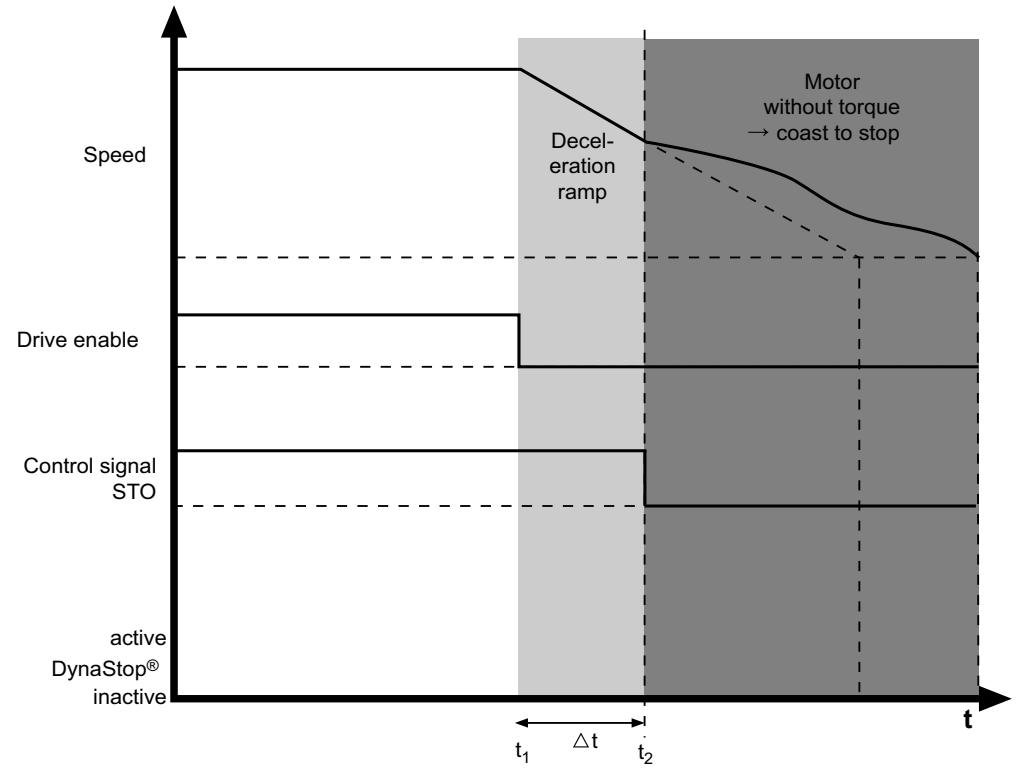
⚠ WARNING

The electrodynamic deceleration function DynaStop® does not allow for a definite stop at a certain position.

Severe or fatal injuries.

- The electrodynamic deceleration function must not be used for hoists.
- For ascending track sections, DynaStop® must only be used following a risk assessment.

If STO is activated before speed "0" is reached, DynaStop® is not activated:



2464217611

t	Time
t_1	Point of time when brake ramp is initiated
t_2	Point of time when STO is triggered
Δt	Time between initiating the brake ramp and STO
	Safe time delay range
	Disconnection range

Activating the STO function during the execution of the ramp aborts the controlled ramp-down:

– The motor coasts to a halt
– The DynaStop® function is not activated
– The deceleration distance is not defined

Possible reasons for premature activation of STO:

– Deceleration time Δt too short
– Extension of the deceleration ramp due to current limit, e.g. load too high

3 Safety Conditions

The requirement for safe operation is that the safety functions of MOVIGEAR® are properly integrated into an application-specific higher-level safety function. A system/machine-specific risk assessment must be carried out by the system/machine manufacturer and taken into account for the use of the drive system with MOVIGEAR®.

The system/machine manufacturer and the operator are responsible for compliance of the system/machine with applicable safety regulations.

The following requirements are mandatory when installing and operating MOVIGEAR® units in safety-related applications.

The requirements are divided into:

- Approved devices
- Installation requirements
- Requirements for external safety controllers and safety relays
- Startup requirements
- Operation requirements

3.1 Approved units

Only the following unit variants of MOVIGEAR® are permitted for safety-related applications.

Type code example	**MG**	**F**	**A**	**S**	**2-**	**DSM-**	**SNI-**	**B**	**/XX**
Explanation	Product series	Gear unit type	Shaft variant	Housing mounting type	Size	Motor type	Installation technology	Version	Options
Permitted variants	MG	F	A T	S T	2 4	DSM	SNI DSC DAC DBC	B	/ECR /ET /DSP /IV

Permitted application options:

- GIO12A
- GIO13A

3.2 Installation requirements

- Power lines and STO control lines have to be routed in separate cables.
- The length of the cable from the safety controller to MOVIGEAR® must not exceed 100 m.
- The wiring technology used must comply with EN60204-1.
- The STO control lines must be routed according to EMC guidelines and as follows:
  - Outside an electrical installation space: Shielded cables must be routed permanently (fixed) and protected against external damage, or equivalent measures have to be taken.
  - Inside an electrical installation space: Individual conductors can be routed.
  - Observe the respective regulations governing the application.
- Ensure that parasitic voltages cannot be generated in the STO control lines.
- Observe the values specified for safety components when designing the safety circuits.
- The STO signal must not be used for feedback.
- Observe the notes in the MOVIGEAR® operating instructions on EMC compliant installation.

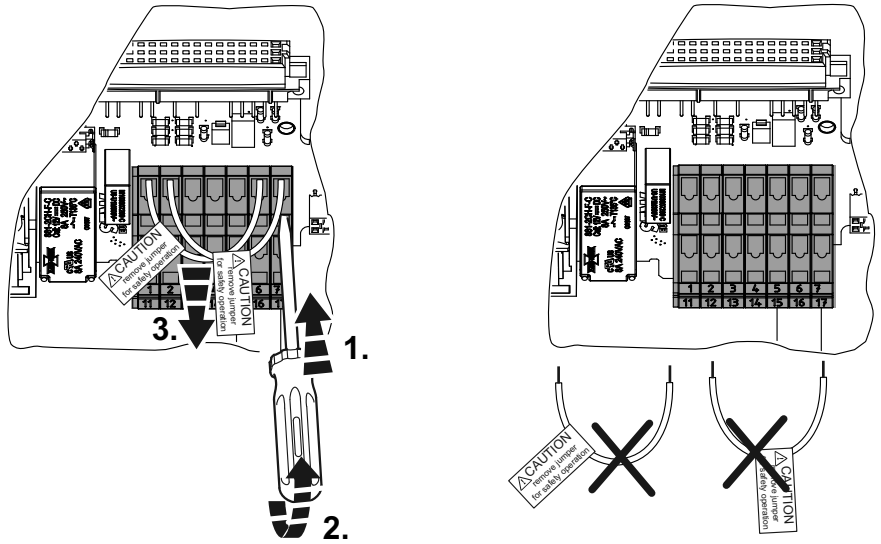
  It is important that the shielding of the STO control line is connected to the housing at both ends.
- Only use grounded voltage sources with safe disconnection (PELV) according to VDE 0100 and EN 60204-1 for all signal interfaces (SBus, binary inputs, binary output, etc.) of MOVIGEAR® and all SBus stations.

  In case of a single fault, the voltage between the outputs or between any output and grounded parts must not exceed DC 60 V.
- When planning the installation, observe the technical data of MOVIGEAR®.
- Do not use the DC 24 V output of MOVIGEAR® for safety-related applications with MOVIGEAR®.

- For safety-related applications with MOVIGEAR®, you have to remove the jumpers labeled "Caution, remove jumper for safety Operation", see following table (does not apply to unit types with STO plug connectors X5502 and X5503):

MOVIGEAR® DBC-B and DAC-B

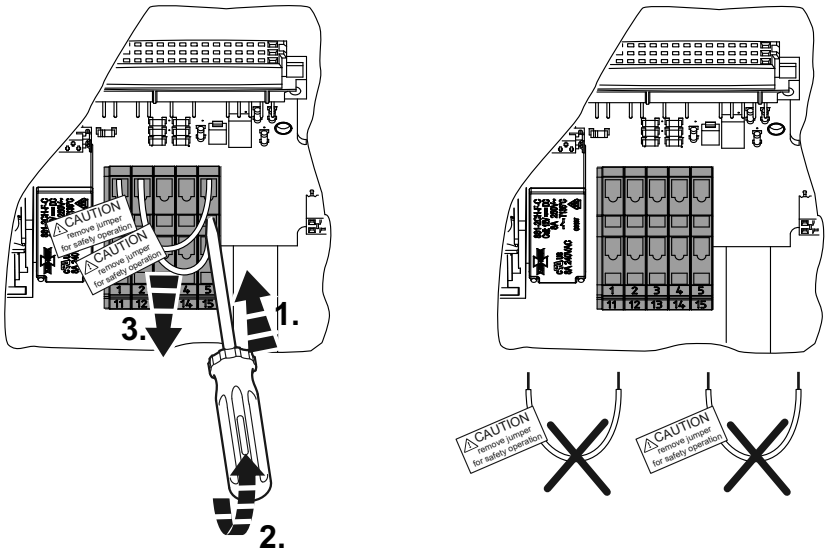
Remove the jumpers between STO input (terminals 1/2) and 24 V output (terminals 6/7):



3152002955

MOVIGEAR® DSC-B and SNI-B

Remove the jumpers between STO input (terminals 1/2) and 24 V output (terminals 5/15):



3152004875

⚠ DANGER

No safe disconnection of MOVIGEAR®.

Severe or fatal injuries.

- Do not use the 24 V output for safety-related applications with MOVIGEAR®.
- The STO input may only be jumpered with 24 V if MOVIGEAR® does not perform any safety function.

3.3 Requirements on the external safety controller

A safety relay can be used as an alternative to a safety controller. The following requirements apply analogously.

- The safety controller and all other safety-related subsystems must be approved for at least that safety class which is required in the overall system for the respective, application-related safety function.

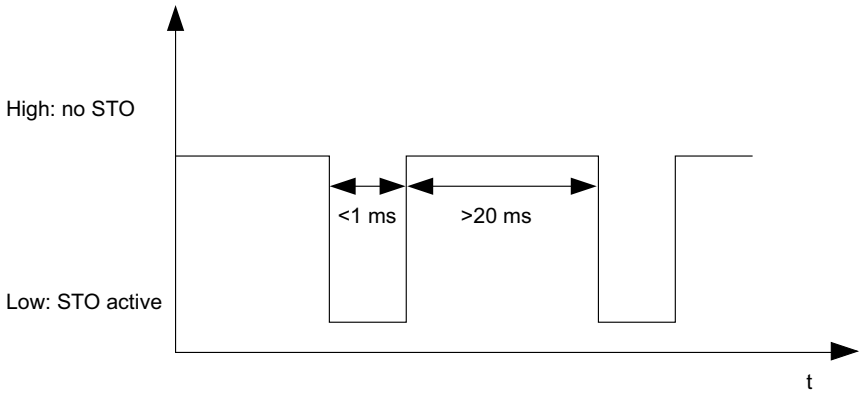
  The following table shows an example of the required safety class of the safety controller:

Application	Safety controller requirements
Performance level e according to EN ISO 13849-1	Performance level e according to EN ISO 13849-1 SIL 3 according to EN 61508
SIL 3 according to EN 62061	Performance level e according to EN ISO 13849-1 SIL 3 according to EN 61508

- The wiring of the safety controller must be suitable for the required safety class, (see manufacturer documentation). The STO input of MOVIGEAR® requires 2-pole disconnection.
- The values specified for the safety controller must be strictly adhered to when designing the circuit.
- The switching capacity of the safety relays or the relay outputs of the safety controller must at least correspond to the maximally permitted, limited output current of the 24 V voltage supply.

  Observe the manufacturer's instructions concerning the permitted contact loads and fusing that may be required for the safety contacts. If the manufacturer provides no specific information on this issue, the contacts must be protected with 0.6 times the nominal value of the maximum contact rating specified by the manufacturer.
- To ensure protection against unintended restart in accordance with EN 1037, the safe control system must be designed and connected in such a way that resetting the control device alone does not lead to a restart. A restart may only be carried out after a manual reset of the safety circuit.

- Note the following for two-pole disconnection of MOVIGEAR® with tested, safe outputs:
  - When disconnected, the switch-on test pulses may never occur at the plus and minus output at the same time.
  - When connected, the switch-off test pulses may not be longer than 1 ms. The next pulse blanking cannot reoccur earlier than after 20 ms.

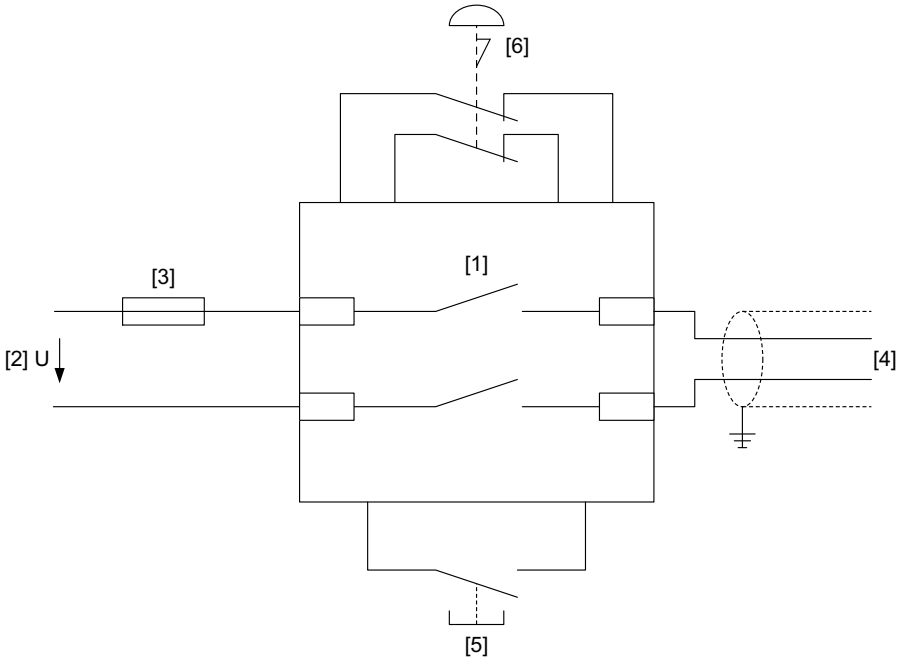


2465901195

3.3.1 "Safety relay" switching example

The following figure shows the basic connection of an external safety relay (according to the requirements listed above) to MOVIGEAR®.

The information in the respective manufacturer's data sheets must be observed for connection.



2466502411

[1] Safety relay with approval
[2] DC 24 V voltage supply
[3] Fuses in accordance with the manufacturer's specifications of the safety relay
[4] STO signal
[5] Reset button for manual reset
[6] Permitted emergency stop actuating device

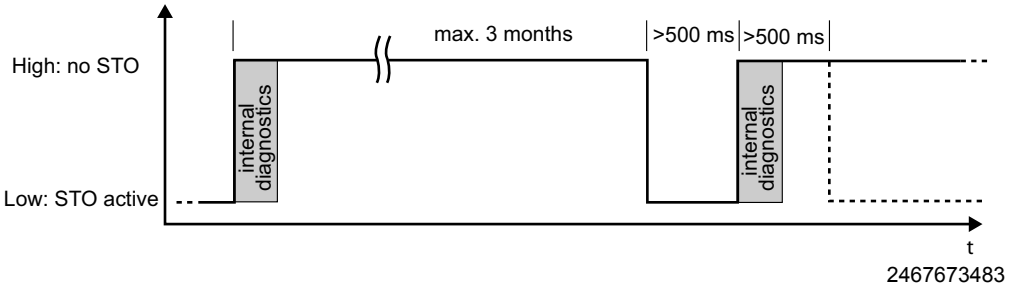
3.4 Startup requirements

- To validate the realized safety functions, they must be documented and checked after successful startup (validation).

  Observe the limitations for safety functions in chapter "Limitations" for the validation of the safety functions. Non-safety-relevant parts and components that affect the result of the validation test must be deactivated, if necessary.
- For using MOVIGEAR® in safety-relevant applications, it is essential that you perform and record startup checks for the disconnecting device and correct wiring.

3.5 Operation requirements

- Operation is only allowed within the limits specified in the data sheets. This principle applies to the external safety controller as well as to MOVIGEAR® and approved options.
- The built-in diagnostic function is limited in case of a permanently enabled or permanently disabled STO input. Only when the STO signal is activated ("Low" to "High"), extended diagnostic functions are performed. This means that the STO input must be switched at least once in three months while the supply system is connected to achieve a complete test coverage. Follow this test procedure:

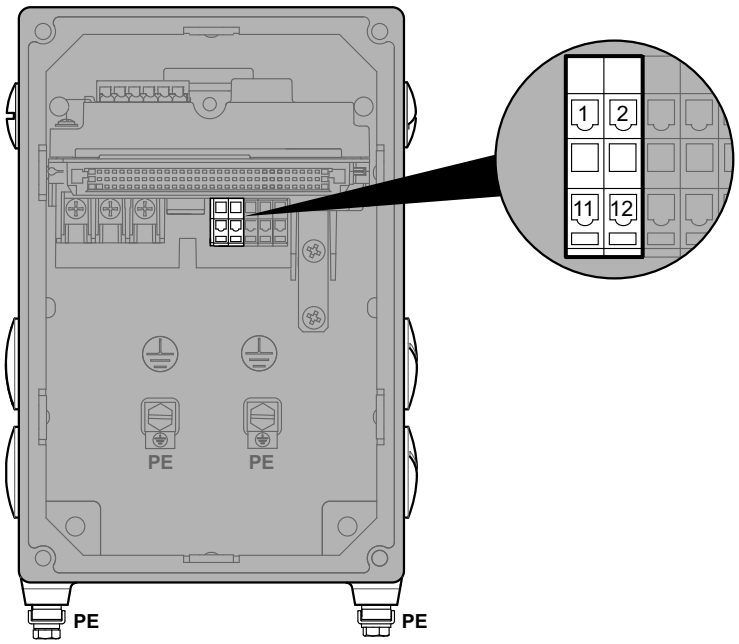


- To achieve complete test coverage after a unit reset (e.g. after connecting the supply system), the test transition (STO active → not active) can only be started at least 10 seconds later. The unit must (already) be signaling "ready for operation" or "safe stop" (STO) and may not be in error state.
- A detected hardware fault in the internal switch-off channels for STO will lead to a locking error state of MOVIGEAR®. When the error is reset (e.g. by switching the power supply off and back on), a complete internal diagnostics test run must be performed according to the above test procedure. If the error re-occurs, replace the unit or contact SEW Service (for detailed information about possible error states, refer to the respective MOVIGEAR® operating instructions).

4 Connection Variants

4.1 Position of the terminals for safe torque off (STO)

The following figure shows an example of the terminal positions for safe torque off (STO) of MOVIGEAR®:



2552708747

4.2 Assignment of the terminals for safe torque off (STO)

The following figure shows the terminal assignment for safe torque off (STO) of MOVIGEAR®:

Assignment			
No.	**Name**	**Color**	**Function**
1	**STO+**	Yellow	Input STO+
2	**STO −**	Yellow	Input STO –
11	**STO+**	Yellow	Output STO + (to loop through)
12	**STO −**	Yellow	Output STO – (to loop through)

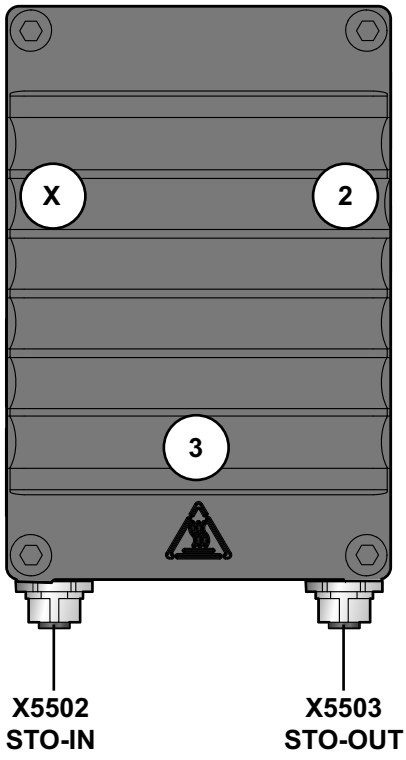
4.2.1 Connection cable

	INFORMATION
	Use shielded cables only for this connection.

4.3 Position of the optional plug connectors for safe torque off (STO)

The STO plug connectors X5502 "STO–IN" and X5503 "STO–OUT" are always in "position 3" as shown in the following figure:

Plug connector	Color	Position	Location
X5502: STO – IN	Orange	Fixed	3 (left)
X5503: STO – OUT	Orange	Fixed	3 (right)



2498125323

4.4 Assignment of the optional plug connectors for safe torque off (STO)

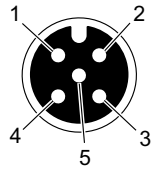
4.4.1 X5502: STO – IN

The following table provides information about this connection:

Function
Input for safe torque off (STO)

Connection type
M12, 5-pole, female, A-coded

Wiring diagram



2264816267

Assignment		
No.	**Name**	**Function**
1	+24V_O	DC 24 V output
2	STO −	Input STO –
3	0V24_O	0V24 reference potential
4	STO+	Input STO+
5	res.	Reserved

⚠ DANGER

No safe disconnection of MOVIGEAR®.

Severe or fatal injuries.

- Do not use the 24 V output (pins 1 and 3) for safety-related applications with MOVIGEAR®.
- The STO input may only be jumpered with 24 V if MOVIGEAR® does not perform any safety function.

4.4.2 Connection cable

INFORMATION

Use shielded cables only for this connection.

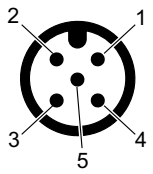
4.4.3 X5503: STO – OUT

The following table provides information about this connection:

Function
Connection for safe torque off (STO) for looping through

Connection type
M12, 5-pole, male, A-coded

Wiring diagram



2264818187

Assignment		
No.	**Name**	**Function**
1	res.	Reserved
2	STO −	Output STO – (to loop through)
3	res.	Reserved
4	STO+	Output STO + (to loop through)
5	res.	Reserved

4.4.4 Connection cable

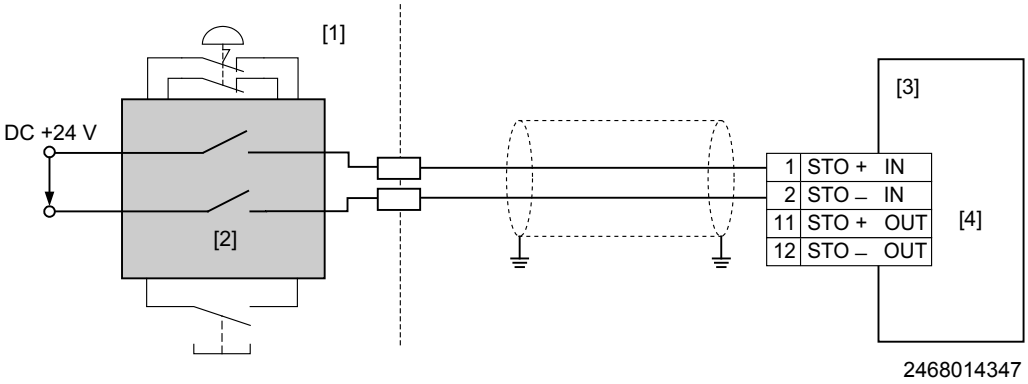
INFORMATION

Use only shielded cables for this connection.

4.5 Connection of an external safety relay for STO

4.5.1 Connection via terminals

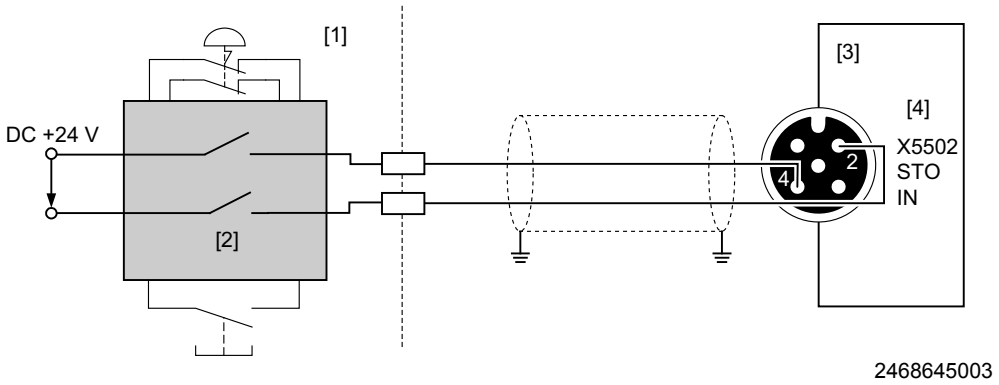
The following figure shows a connection example with a safety relay and disconnection of all poles:



[1] Installation space
[2] Safety relay
[3] MOVIGEAR® B
[4] Connection terminals for STO

4.5.2 Connection via M12 plug connector

The following figure shows a connection example with a safety relay and disconnection of all poles:

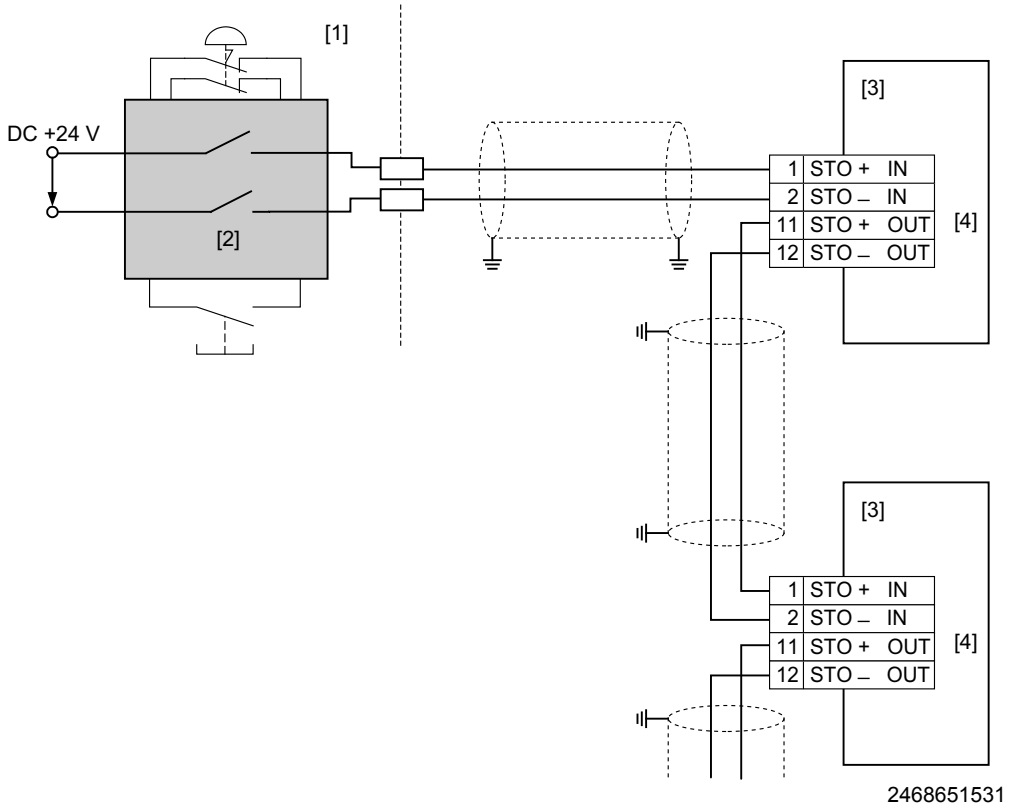


[1] Installation space
[2] Safety relay
[3] MOVIGEAR® B
[4] Plug connector for STO

	INFORMATION
	When wiring the STO signals, possible faults in plug connectors and cables/lines have to be considered (see ISO 13849-2) and the installation has to be designed according to the required safety class. MOVIGEAR® does not detect short circuits in the supply line. SEW-EURODRIVE therefore recommends to connect only STO signals to the STO input using a two-core cable, as shown in the figure.

4.5.3 Connection via terminals – group disconnection

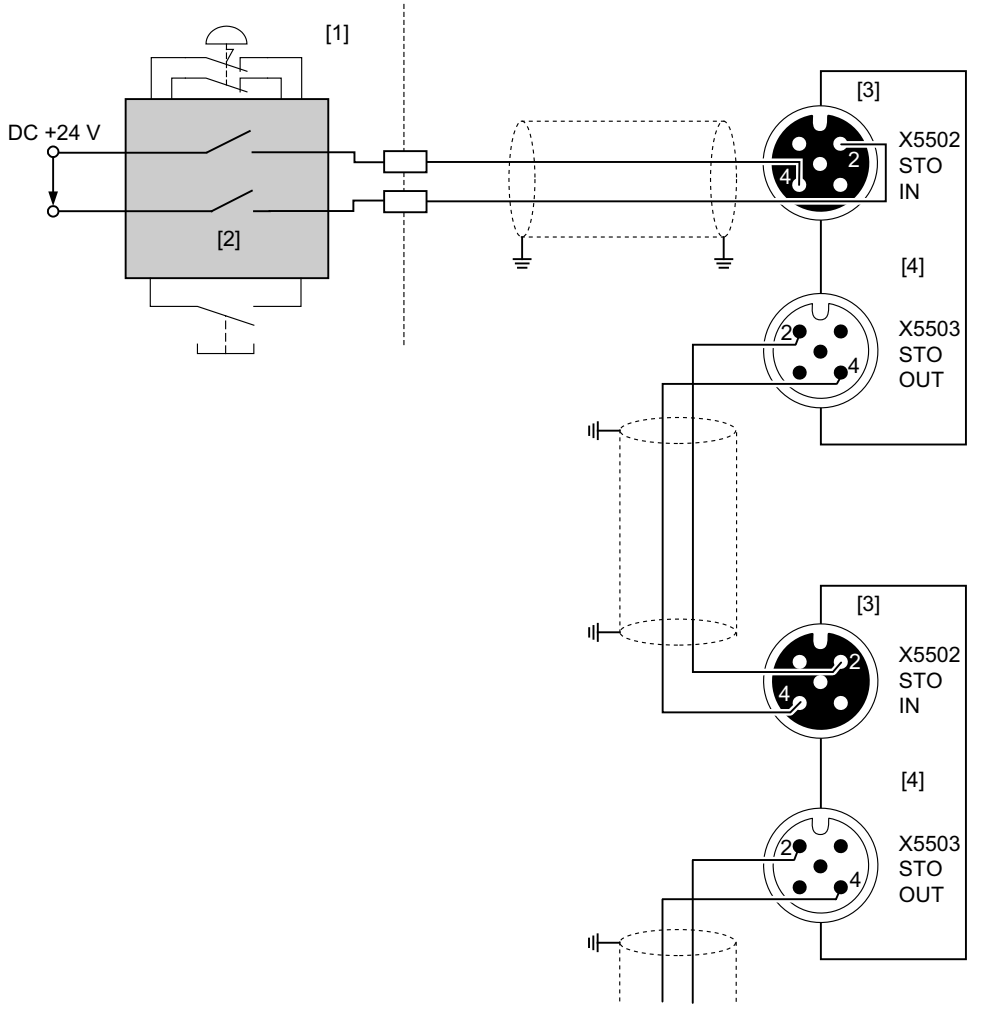
The following figure shows a connection example for disconnection of group drives with a safety relay:



[1] Installation space
[2] Safety relay
[3] MOVIGEAR® B
[4] Connection terminals for STO

4.5.4 Connection via M12 plug connectors – group disconnection

The following figure shows a connection example for disconnection of group drives with a safety relay:



[1] Installation space
[2] Safety relay
[3] MOVIGEAR® B
[4] Plug connector for STO

	INFORMATION
	When wiring the STO signals, possible faults in plug connectors and cables/lines have to be considered (see ISO 13849-2) and the installation has to be designed according to the required safety class. MOVIGEAR® does not detect short circuits in the supply line. SEW-EURODRIVE therefore recommends to connect only STO signals to the STO input using a two-core cable, as shown in the figure.

4.5.5 STO signal for group disconnection

Requirements

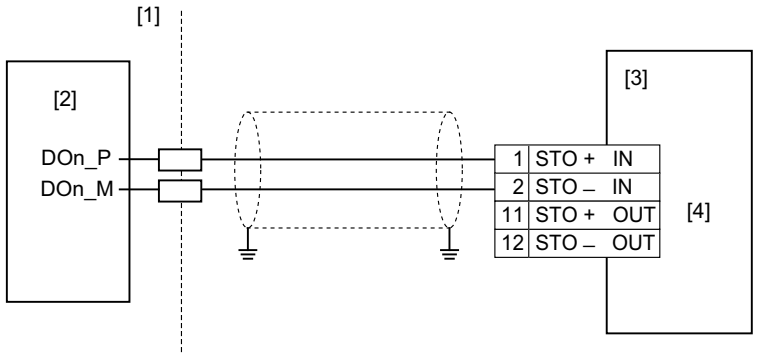
For group drives, the STO signal for several MOVIGEAR® drives can be provided by a single safety relay. The following requirements must be met:

- For EMC reasons, the maximum cable length is limited to 100 m. Other instructions published by the manufacturer on the use of safety relays (for specific applications) must also be observed.
- The maximum output current/the maximally permitted contact load of the safety relay must be observed.
- You must comply with the permitted signal levels at the STO input and all other technical data of MOVIGEAR®. The routing of the STO control cables and the voltage drop must be considered.
- Other requirements of the safety relay manufacturer (such as protecting the output contacts against welding) must be strictly observed. You must also observe the basic cable routing requirements from chapter "Installation requirements".
- A calculation based on the technical data of MOVIGEAR® must be performed separately for each case of group drive disconnection.

4.6 Connection of an external safety controller for STO

4.6.1 Connection via terminals

The following figure shows a connection example with a safety controller and disconnection of all poles for STO:

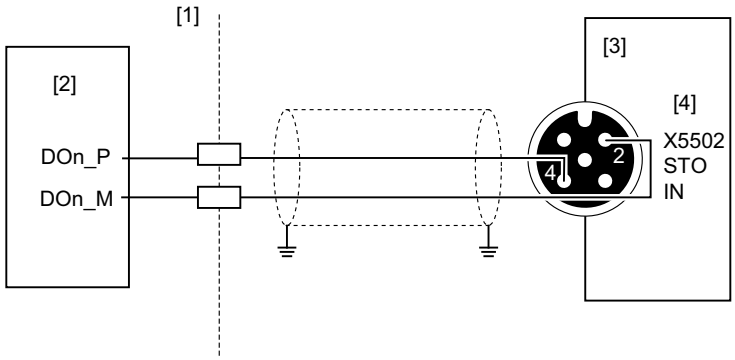


2471315851

[1] Installation space
[2] Safety controller
[3] MOVIGEAR® B
[4] Connection terminals for STO

4.6.2 Connection via plug connectors

The following figure shows a connection example with a safety controller and disconnection of all poles for STO:



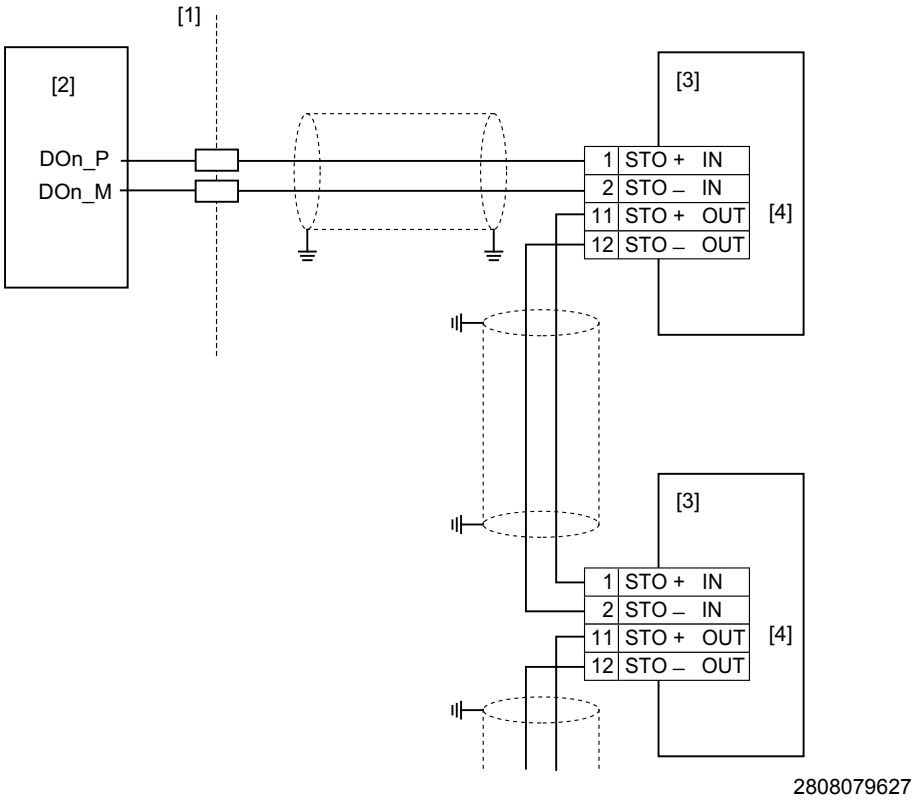
2471842571

[1] Installation space
[2] Safety controller
[3] MOVIGEAR® B
[4] Plug connector for STO

	INFORMATION
	When wiring the STO signals, possible faults in plug connectors and cables/lines have to be considered (see ISO 13849-2) and the installation has to be designed according to the required safety class. MOVIGEAR® does not detect short circuits in the supply line. SEW-EURODRIVE therefore recommends to connect only STO signals to the STO input using a two-core cable, as shown in the figure.

4.6.3 Connection via terminals – group disconnection

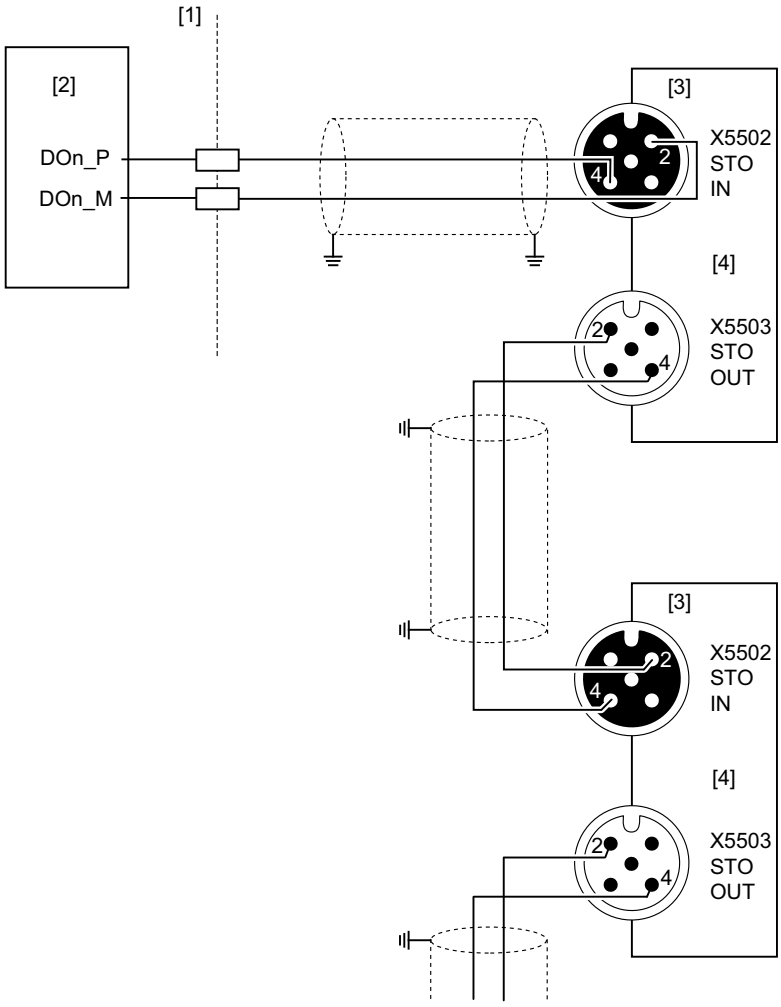
The following figure shows a connection example for disconnection of group drives with a safety controller:



[1] Installation space
[2] Safety controller
[3] MOVIGEAR® B
[4] Connection terminals for STO

4.6.4 Connection via M12 plug connectors – group disconnection

The following figure shows a connection example for disconnection of group drives with a safety controller:



2808077707

[1] Installation space
[2] Safety controller
[3] MOVIGEAR® B
[4] Plug connector for STO

	INFORMATION
	When wiring the STO signals, possible faults in plug connectors and cables/lines have to be considered (see ISO 13849-2) and the installation has to be designed according to the required safety class. MOVIGEAR® does not detect short circuits in the supply line. SEW-EURODRIVE therefore recommends to connect only STO signals to the STO input using a two-core cable, as shown in the figure.

4.6.5 STO signal for group disconnection

Requirements

For group drives, the STO signal for several MOVIGEAR® drives can be provided by a single safety controller. The following requirements must be met:

- For EMC reasons, the maximum cable length is limited to 100 m. Other instructions published by the manufacturer on the use of the safety controller (for the respective application) must also be observed.
- The maximum output current/the maximally permitted contact load of the safety controller must be observed.
- You must comply with the permitted signal levels at the STO input and all other technical data of MOVIGEAR®. The routing of the STO control cables and the voltage drop must be considered.
- Other requirements stipulated by the manufacturer of the safety controller must be strictly observed. You must also observe the basic cable routing requirements in chapter "Installation requirements".
- A calculation based on the technical data of MOVIGEAR® must be performed separately for each case of group drive disconnection.

5 Technical Data

The table below provides the technical data for MOVIGEAR® related to integrated safety technology. The technical data and approvals in the respective MOVIGEAR® operating instructions must be observed in addition.

Technical data of STO input	Min.	Typical	Max.	Unit
Input voltage range	−3	24	30	DC V
Input impedance		1000		Ohm
Switch-on/switch-off threshold		11		V
Input voltage for ON status (STO)	15			V
Input voltage for OFF status (STO)			5	V
Permitted leakage current of the external safety controller		0	2	mA
Time from disconnecting the safety voltage until the deactivation of the rotating field		4	20	ms
Time from connecting the safety voltage until the deactivation of the rotating field		220	300	ms
Test interval for STO function: See test procedure in chapter "Operation requirements"			3	Months

Characteristic safety values	
Approved safety classes	SIL 3 according to IEC 61800-5-2 Performance level e according to EN ISO 13849-1
Probability of a dangerous failure per hour (= PFH value)	1.9×10^{-9} 1/h
Service life	20 years, after which the component must be replaced with a new one.
Safe condition	Safe torque off (STO)

6 Address List

Germany			
Headquarters **Production** **Sales**	**Bruchsal**	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal P.O. Box Postfach 3023 • D-76642 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-1970 http://www.sew-eurodrive.de sew@sew-eurodrive.de
Production / Industrial Gears	**Bruchsal**	SEW-EURODRIVE GmbH & Co KG Christian-Pähr-Str.10 D-76646 Bruchsal	Tel. +49 7251 75-0 Fax +49 7251 75-2970
Service Competence Center	**Central**	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 1 D-76676 Graben-Neudorf	Tel. +49 7251 75-1710 Fax +49 7251 75-1711 sc-mitte@sew-eurodrive.de
	North	SEW-EURODRIVE GmbH & Co KG Alte Ricklinger Straße 40-42 D-30823 Garbsen (near Hannover)	Tel. +49 5137 8798-30 Fax +49 5137 8798-55 sc-nord@sew-eurodrive.de
	East	SEW-EURODRIVE GmbH & Co KG Dänkritzer Weg 1 D-08393 Meerane (near Zwickau)	Tel. +49 3764 7606-0 Fax +49 3764 7606-30 sc-ost@sew-eurodrive.de
	South	SEW-EURODRIVE GmbH & Co KG Domagkstraße 5 D-85551 Kirchheim (near München)	Tel. +49 89 909552-10 Fax +49 89 909552-50 sc-sued@sew-eurodrive.de
	West	SEW-EURODRIVE GmbH & Co KG Siemensstraße 1 D-40764 Langenfeld (near Düsseldorf)	Tel. +49 2173 8507-30 Fax +49 2173 8507-55 sc-west@sew-eurodrive.de
	Electronics	SEW-EURODRIVE GmbH & Co KG Ernst-Blickle-Straße 42 D-76646 Bruchsal	Tel. +49 7251 75-1780 Fax +49 7251 75-1769 sc-elektronik@sew-eurodrive.de
	Drive Service Hotline / 24 Hour Service		+49 180 5 SEWHELP +49 180 5 7394357
	Additional addresses for service in Germany provided on request!		

France			
Production **Sales** **Service**	**Haguenau**	SEW-USOCOME 48-54 route de Soufflenheim B. P. 20185 F-67506 Haguenau Cedex	Tel. +33 3 88 73 67 00 Fax +33 3 88 73 66 00 http://www.usocome.com sew@usocome.com
Production	**Forbach**	SEW-USOCOME Zone industrielle Technopôle Forbach Sud B. P. 30269 F-57604 Forbach Cedex	Tel. +33 3 87 29 38 00
Assembly **Sales** **Service**	**Bordeaux**	SEW-USOCOME Parc d'activités de Magellan 62 avenue de Magellan - B. P. 182 F-33607 Pessac Cedex	Tel. +33 5 57 26 39 00 Fax +33 5 57 26 39 09
	Lyon	SEW-USOCOME Parc d'affaires Roosevelt Rue Jacques Tati F-69120 Vaulx en Velin	Tel. +33 4 72 15 37 00 Fax +33 4 72 15 37 15
	Nantes	SEW-USOCOME Parc d'activités de la forêt 4 rue des Fontenelles F-44140 Le Bignon	Tel. +33 2 40 78 42 00 Fax +33 2 40 78 42 20

France			
	Paris	SEW-USOCOME Zone industrielle 2 rue Denis Papin F-77390 Verneuil l'Etang	Tel. +33 1 64 42 40 80 Fax +33 1 64 42 40 88
	Additional addresses for service in France provided on request!		

Algeria			
Sales	**Alger**	REDUCOM Sarl 16, rue des Frères Zaghnoune Bellevue 16200 El Harrach Alger	Tel. +213 21 8214-91 Fax +213 21 8222-84 info@reducom-dz.com http://www.reducom-dz.com

Argentina			
Assembly **Sales** **Service**	**Buenos Aires**	SEW EURODRIVE ARGENTINA S.A. Centro Industrial Garin, Lote 35 Ruta Panamericana Km 37,5 1619 Garin	Tel. +54 3327 4572-84 Fax +54 3327 4572-21 sewar@sew-eurodrive.com.ar http://www.sew-eurodrive.com.ar

Australia			
Assembly **Sales** **Service**	**Melbourne**	SEW-EURODRIVE PTY. LTD. 27 Beverage Drive Tullamarine, Victoria 3043	Tel. +61 3 9933-1000 Fax +61 3 9933-1003 http://www.sew-eurodrive.com.au enquires@sew-eurodrive.com.au
	Sydney	SEW-EURODRIVE PTY. LTD. 9, Sleigh Place, Wetherill Park New South Wales, 2164	Tel. +61 2 9725-9900 Fax +61 2 9725-9905 enquires@sew-eurodrive.com.au

Austria			
Assembly **Sales** **Service**	**Wien**	SEW-EURODRIVE Ges.m.b.H. Richard-Strauss-Strasse 24 A-1230 Wien	Tel. +43 1 617 55 00-0 Fax +43 1 617 55 00-30 http://www.sew-eurodrive.at sew@sew-eurodrive.at

Belarus			
Sales	**Minsk**	SEW-EURODRIVE BY RybalkoStr. 26 BY-220033 Minsk	Tel.+375 17 298 47 56 / 298 47 58 Fax +375 17 298 47 54 http://www.sew.by sales@sew.by

Belgium			
Assembly **Sales** **Service**	**Brussels**	**SEW Caron-Vector** Research park Haasrode Evenementenlaan 7 BE-3001 Leuven	Tel. +32 16 386-311 Fax +32 16 386-336 http://www.sew-eurodrive.be info@sew-eurodrive.be
Service Competence Center	**Industrial Gears**	**SEW Caron-Vector** Rue de Parc Industriel, 31 BE-6900 Marche-en-Famenne	Tel. +32 84 219-878 Fax +32 84 219-879 http://www.sew-eurodrive.be service-wallonie@sew-eurodrive.be
	Antwerp	**SEW Caron-Vector** Glasstraat, 19 BE-2170 Merksem	Tel. +32 3 64 19 333 Fax +32 3 64 19 336 http://www.sew-eurodrive.be service-antwerpen@sew-eurodrive.be

Brazil			
Production **Sales** **Service**	**Sao Paulo**	SEW-EURODRIVE Brasil Ltda. Avenida Amâncio Gaiolli, 152 - Rodovia Presidente Dutra Km 208 Guarulhos - 07251-250 - SP SAT - SEW ATENDE - 0800 7700496	Tel. +55 11 2489-9133 Fax +55 11 2480-3328 http://www.sew-eurodrive.com.br sew@sew.com.br

Bulgaria			
Sales	**Sofia**	BEVER-DRIVE GmbH Bogdanovetz Str.1 BG-1606 Sofia	Tel. +359 2 9151160 Fax +359 2 9151166 bever@mail.bg

Cameroon			
Sales	**Douala**	Electro-Services Rue Drouot Akwa B.P. 2024 Douala	Tel. +237 33 431137 Fax +237 33 431137 electrojemba@yahoo.fr

Canada			
Assembly **Sales** **Service**	**Toronto**	SEW-EURODRIVE CO. OF CANADA LTD. 210 Walker Drive Bramalea, ON L6T 3W1	Tel. +1 905 791-1553 Fax +1 905 791-2999 http://www.sew-eurodrive.ca l.watson@sew-eurodrive.ca
	Vancouver	SEW-EURODRIVE CO. OF CANADA LTD. Tilbury Industrial Park 7188 Honeyman Street Delta, BC V4G 1G1	Tel. +1 604 946-5535 Fax +1 604 946-2513 b.wake@sew-eurodrive.ca
	Montreal	SEW-EURODRIVE CO. OF CANADA LTD. 2555 Rue Leger Lasalle, PQ H8N 2V9	Tel. +1 514 367-1124 Fax +1 514 367-3677 a.peluso@sew-eurodrive.ca
	Additional addresses for service in Canada provided on request!		

Chile			
Assembly **Sales** **Service**	**Santiago de Chile**	SEW-EURODRIVE CHILE LTDA. Las Encinas 1295 Parque Industrial Valle Grande LAMPA RCH-Santiago de Chile P.O. Box Casilla 23 Correo Quilicura - Santiago - Chile	Tel. +56 2 75770-00 Fax +56 2 75770-01 http://www.sew-eurodrive.cl ventas@sew-eurodrive.cl

China			
Production **Assembly** **Sales** **Service**	**Tianjin**	SEW-EURODRIVE (Tianjin) Co., Ltd. No. 46, 7th Avenue, TEDA Tianjin 300457	Tel. +86 22 25322612 Fax +86 22 25323273 info@sew-eurodrive.cn http://www.sew-eurodrive.com.cn
Assembly **Sales** **Service**	**Suzhou**	SEW-EURODRIVE (Suzhou) Co., Ltd. 333, Suhong Middle Road Suzhou Industrial Park Jiangsu Province, 215021	Tel. +86 512 62581781 Fax +86 512 62581783 suzhou@sew-eurodrive.cn
	Guangzhou	SEW-EURODRIVE (Guangzhou) Co., Ltd. No. 9, JunDa Road East Section of GETDD Guangzhou 510530	Tel. +86 20 82267890 Fax +86 20 82267922 guangzhou@sew-eurodrive.cn
	Shenyang	SEW-EURODRIVE (Shenyang) Co., Ltd. 10A-2, 6th Road Shenyang Economic Technological Development Area Shenyang, 110141	Tel. +86 24 25382538 Fax +86 24 25382580 shenyang@sew-eurodrive.cn
	Wuhan	SEW-EURODRIVE (Wuhan) Co., Ltd. 10A-2, 6th Road No. 59, the 4th Quanli Road, WEDA 430056 Wuhan	Tel. +86 27 84478388 Fax +86 27 84478389 wuhan@sew-eurodrive.cn

China			
	Xi'An	SEW-EURODRIVE (Xi'An) Co., Ltd. No. 12 Jinye 2nd Road Xi'An High-Technology Industrial Development Zone Xi'An 710065	Tel. +86 29 68686262 Fax +86 29 68686311 xian@sew-eurodrive.cn
	Additional addresses for service in China provided on request!		

Colombia			
Assembly **Sales** **Service**	**Bogotá**	SEW-EURODRIVE COLOMBIA LTDA. Calle 22 No. 132-60 Bodega 6, Manzana B Santafé de Bogotá	Tel. +57 1 54750-50 Fax +57 1 54750-44 http://www.sew-eurodrive.com.co sewcol@sew-eurodrive.com.co

Croatia			
Sales **Service**	**Zagreb**	KOMPEKS d. o. o. Zeleni dol 10 HR 10 000 Zagreb	Tel. +385 1 4613-158 Fax +385 1 4613-158 kompeks@inet.hr

Czech Republic			
Sales	**Prague**	SEW-EURODRIVE CZ S.R.O. Business Centrum Praha Lužná 591 CZ-16000 Praha 6 - Vokovice	Tel. +420 255 709 601 Fax +420 220 121 237 http://www.sew-eurodrive.cz sew@sew-eurodrive.cz

Denmark			
Assembly **Sales** **Service**	**Copenhagen**	SEW-EURODRIVEA/S Geminivej 28-30 DK-2670 Greve	Tel. +45 43 9585-00 Fax +45 43 9585-09 http://www.sew-eurodrive.dk sew@sew-eurodrive.dk

Egypt			
Sales **Service**	**Cairo**	Copam Egypt for Engineering & Agencies 33 El Hegaz ST, Heliopolis, Cairo	Tel. +20 2 22566-299 + 1 23143088 Fax +20 2 22594-757 http://www.copam-egypt.com/ copam@datum.com.eg

Estonia			
Sales	**Tallin**	ALAS-KUUL AS Reti tee 4 EE-75301 Peetri küla, Rae vald, Harjumaa	Tel. +372 6593230 Fax +372 6593231 veiko.soots@alas-kuul.ee

Finland			
Assembly **Sales** **Service**	**Lahti**	SEW-EURODRIVE OY Vesimäentie 4 FIN-15860 Hollola 2	Tel. +358 201 589-300 Fax +358 3 780-6211 http://www.sew-eurodrive.fi sew@sew.fi
Production **Assembly**	**Karkkila**	SEW Industrial Gears Oy Valurinkatu 6, PL 8 FI-03600 Karkkila, 03601 Karkkila	Tel. +358 201 589-300 Fax +358 201 589-310 sew@sew.fi http://www.sew-eurodrive.fi

Gabon			
Sales	**Libreville**	ESG Electro Services Gabun Feu Rouge Lalala 1889 Libreville Gabun	Tel. +241 741059 Fax +241 741059 esg_services@yahoo.fr

Address List

Great Britain			
Assembly **Sales** **Service**	**Normanton**	SEW-EURODRIVE Ltd. Beckbridge Industrial Estate P.O. Box No.1 Normanton, West-Yorkshire WF6 1QR	Tel. +44 1924 893-855 Fax +44 1924 893-702 http://www.sew-eurodrive.co.uk info@sew-eurodrive.co.uk

Greece			
Sales **Service**	**Athens**	Christ. Boznos & Son S.A. 12, K. Mavromichali Street P.O. Box 80136 GR-18545 Piraeus	Tel. +30 2 1042 251-34 Fax +30 2 1042 251-59 http://www.boznos.gr info@boznos.gr

Hong Kong			
Assembly **Sales** **Service**	**Hong Kong**	SEW-EURODRIVE LTD. Unit No. 801-806, 8th Floor Hong Leong Industrial Complex No. 4, Wang Kwong Road Kowloon, Hong Kong	Tel. +852 36902200 Fax +852 36902211 contact@sew-eurodrive.hk

Hungary			
Sales **Service**	**Budapest**	SEW-EURODRIVE Kft. H-1037 Budapest Kunigunda u. 18	Tel. +36 1 437 06-58 Fax +36 1 437 06-50 office@sew-eurodrive.hu

India			
Registered Office **Assembly** **Sales** **Service**	**Vadodara**	SEW-EURODRIVE India Private Limited Plot No. 4, GIDC POR Ramangamdi • Vadodara - 391 243 Gujarat	Tel. +91 265 3045200, +91 265 2831086 Fax +91 265 3045300, +91 265 2831087 http://www.seweurodriveindia.com sales@seweurodriveindia.com subodh.ladwa@seweurodriveindia.com
Assembly **Sales** **Service**	**Chennai**	SEW-EURODRIVE India Private Limited Plot No. K3/1, Sipcot Industrial Park Phase II Mambakkam Village Sriperumbudur - 602105 Kancheepuram Dist, Tamil Nadu	Tel. +91 44 37188888 Fax +91 44 37188811 c.v.shivkumar@seweurodriveindia.com

Ireland			
Sales **Service**	**Dublin**	Alperton Engineering Ltd. 48 Moyle Road Dublin Industrial Estate Glasnevin, Dublin 11	Tel. +353 1 830-6277 Fax +353 1 830-6458 info@alperton.ie http://www.alperton.ie

Israel			
Sales	**Tel-Aviv**	Liraz Handasa Ltd. Ahofer Str 34B / 228 58858 Holon	Tel. +972 3 5599511 Fax +972 3 5599512 http://www.liraz-handasa.co.il office@liraz-handasa.co.il

Italy			
Assembly **Sales** **Service**	**Solaro**	SEW-EURODRIVE di R. Blickle & Co.s.a.s. Via Bernini,14 I-20020 Solaro (Milano)	Tel. +39 02 96 9801 Fax +39 02 96 799781 http://www.sew-eurodrive.it sewit@sew-eurodrive.it

Ivory Coast			
Sales	**Abidjan**	SICA Société industrielle & commerciale pour l'Afrique 165, Boulevard de Marseille 26 BP 1115 Abidjan 26	Tel. +225 21 25 79 44 Fax +225 21 25 88 28 sicamot@aviso.ci

Japan			
Assembly **Sales** **Service**	**Iwata**	SEW-EURODRIVE JAPAN CO., LTD 250-1, Shimoman-no, Iwata Shizuoka 438-0818	Tel. +81 538 373811 Fax +81 538 373855 http://www.sew-eurodrive.co.jp sewjapan@sew-eurodrive.co.jp

Kazakhstan			
Sales	**Almaty**	ТОО "СЕВ-ЕВРОДРАЙВ" пр.Райымбека, 348 050061 г. Алматы Республика Казахстан	Тел. +7 (727) 334 1880 Факс +7 (727) 334 1881 http://www.sew-eurodrive.kz sew@sew-eurodrive.kz

Latvia			
Sales	**Riga**	SIA Alas-Kuul Katlakalna 11C LV-1073 Riga	Tel. +371 6 7139253 Fax +371 6 7139386 http://www.alas-kuul.com info@alas-kuul.com

Lebanon			
Sales	**Beirut**	Gabriel Acar & Fils sarl B. P. 80484 Bourj Hammoud, Beirut	Tel. +961 1 510 532 Fax +961 1 494 971 ssacar@inco.com.lb
Jordan Kuwait Saudi Arabia Syria	**Beirut**	Middle East Drives S.A.L. (offshore) Sin El Fil. B. P. 55-378 Beirut	Tel. +961 1 494 786 Fax +961 1 494 971 info@medrives.com http://www.medrives.com

Lithuania			
Sales	**Alytus**	UAB Irseva Statybininku 106C LT-63431 Alytus	Tel. +370 315 79204 Fax +370 315 56175 info@irseva.lt http://www.sew-eurodrive.lt

Luxembourg			
Assembly **Sales** **Service**	**Brussels**	**SEW Caron-Vector** Research park Haasrode Evenementenlaan 7 BE-3001 Leuven	Tel. +32 16 386-311 Fax +32 16 386-336 http://www.sew-eurodrive.be info@sew-eurodrive.be

Malaysia			
Assembly **Sales** **Service**	**Johore**	SEW-EURODRIVE SDN BHD No. 95, Jalan Seroja 39, Taman Johor Jaya 81000 Johor Bahru, Johor West Malaysia	Tel. +60 7 3549409 Fax +60 7 3541404 sales@sew-eurodrive.com.my

Mexico			
Assembly **Sales** **Service**	**Quéretaro**	SEW-EURODRIVE MEXICO SA DE CV SEM-981118-M93 Tequisquiapan No. 102 Parque Industrial Quéretaro C.P. 76220 Quéretaro, México	Tel. +52 442 1030-300 Fax +52 442 1030-301 http://www.sew-eurodrive.com.mx scmexico@seweurodrive.com.mx

Morocco			
Sales	**Casablanca**	Afit Route D'El Jadida KM 14 RP8 Province de Nouaceur Commune Rurale de Bouskoura MA 20300 Casablanca	Tel. +212 522633700 Fax +212 522621588 fatima.haquiq@premium.net.ma http://www.groupe-premium.com

Netherlands			
Assembly **Sales** **Service**	**Rotterdam**	VECTOR Aandrijftechniek B.V. Industrieweg 175 NL-3044 AS Rotterdam Postbus 10085 NL-3004 AB Rotterdam	Tel. +31 10 4463-700 Fax +31 10 4155-552 http://www.vector.nu info@vector.nu

New Zealand			
Assembly **Sales** **Service**	**Auckland**	SEW-EURODRIVE NEW ZEALAND LTD. P.O. Box 58-428 82 Greenmount drive East Tamaki Auckland	Tel. +64 9 2745627 Fax +64 9 2740165 http://www.sew-eurodrive.co.nz sales@sew-eurodrive.co.nz
	Christchurch	SEW-EURODRIVE NEW ZEALAND LTD. 10 Settlers Crescent, Ferrymead Christchurch	Tel. +64 3 384-6251 Fax +64 3 384-6455 sales@sew-eurodrive.co.nz

Norway			
Assembly **Sales** **Service**	**Moss**	SEW-EURODRIVE A/S Solgaard skog 71 N-1599 Moss	Tel. +47 69 24 10 20 Fax +47 69 24 10 40 http://www.sew-eurodrive.no sew@sew-eurodrive.no

Pakistan			
Sales	**Karachi**	Industrial Power Drives Al-Fatah Chamber A/3, 1st Floor Central Commercial Area, Sultan Ahmed Shah Road, Block 7/8, Karachi	Tel. +92 21 452 9369 Fax +92-21-454 7365 seweurodrive@cyber.net.pk

Peru			
Assembly **Sales** **Service**	**Lima**	SEW DEL PERU MOTORES REDUCTORES S.A.C. Los Calderos, 120-124 Urbanizacion Industrial Vulcano, ATE, Lima	Tel. +51 1 3495280 Fax +51 1 3493002 http://www.sew-eurodrive.com.pe sewperu@sew-eurodrive.com.pe

Poland			
Assembly **Sales** **Service**	**Lodz**	SEW-EURODRIVE Polska Sp.z.o.o. ul. Techniczna 5 PL-92-518 Łódź	Tel. +48 42 676 53 00 Fax +48 42 676 53 45 http://www.sew-eurodrive.pl sew@sew-eurodrive.pl
	24 Hour Service		Tel. +48 602 739 739 (+48 602 SEW SEW) serwis@sew-eurodrive.pl

Portugal			
Assembly **Sales** **Service**	**Coimbra**	SEW-EURODRIVE, LDA. Apartado 15 P-3050-901 Mealhada	Tel. +351 231 20 9670 Fax +351 231 20 3685 http://www.sew-eurodrive.pt infosew@sew-eurodrive.pt

Romania			
Sales **Service**	**Bucharest**	Sialco Trading SRL str. Madrid nr.4 011785 Bucuresti	Tel. +40 21 230-1328 Fax +40 21 230-7170 sialco@sialco.ro

Russia			
Assembly **Sales** **Service**	**St. Petersburg**	ZAO SEW-EURODRIVE P.O. Box 36 195220 St. Petersburg Russia	Tel. +7 812 3332522 +7 812 5357142 Fax +7 812 3332523 http://www.sew-eurodrive.ru sew@sew-eurodrive.ru

Senegal			
Sales	**Dakar**	SENEMECA Mécanique Générale Km 8, Route de Rufisque B.P. 3251, Dakar	Tel. +221 338 494 770 Fax +221 338 494 771 senemeca@sentoo.sn http://www.senemeca.com

Serbia			
Sales	**Beograd**	DIPAR d.o.o. Ustanicka 128a PC Košum, IV floor SCG-11000 Beograd	Tel. +381 11 347 3244 / +381 11 288 0393 Fax +381 11 347 1337 office@dipar.rs

Singapore			
Assembly **Sales** **Service**	**Singapore**	SEW-EURODRIVE PTE. LTD. No 9, Tuas Drive 2 Jurong Industrial Estate Singapore 638644	Tel. +65 68621701 Fax +65 68612827 http://www.sew-eurodrive.com.sg sewsingapore@sew-eurodrive.com

Slovakia			
Sales	**Bratislava**	SEW-Eurodrive SK s.r.o. Rybničná 40 SK-831 06 Bratislava	Tel. +421 2 33595 202 Fax +421 2 33595 200 sew@sew-eurodrive.sk http://www.sew-eurodrive.sk
	Žilina	SEW-Eurodrive SK s.r.o. Industry Park - PChZ ulica M.R.Štefánika 71 SK-010 01 Žilina	Tel. +421 41 700 2513 Fax +421 41 700 2514 sew@sew-eurodrive.sk
	Banská Bystrica	SEW-Eurodrive SK s.r.o. Rudlovská cesta 85 SK-974 11 Banská Bystrica	Tel. +421 48 414 6564 Fax +421 48 414 6566 sew@sew-eurodrive.sk
	Košice	SEW-Eurodrive SK s.r.o. Slovenská ulica 26 SK-040 01 Košice	Tel. +421 55 671 2245 Fax +421 55 671 2254 sew@sew-eurodrive.sk

Slovenia			
Sales **Service**	**Celje**	Pakman - Pogonska Tehnika d.o.o. UI. XIV. divizije 14 SLO - 3000 Celje	Tel. +386 3 490 83-20 Fax +386 3 490 83-21 pakman@siol.net

South Africa			
Assembly **Sales** **Service**	**Johannesburg**	SEW-EURODRIVE (PROPRIETARY) LIMITED Eurodrive House Cnr. Adcock Ingram and Aerodrome Roads Aeroton Ext. 2 Johannesburg 2013 P.O.Box 90004 Bertsham 2013	Tel. +27 11 248-7000 Fax +27 11 494-3104 http://www.sew.co.za info@sew.co.za

South Africa			
	Cape Town	SEW-EURODRIVE (PROPRIETARY) LIMITED Rainbow Park Cnr. Racecourse & Omuramba Road Montague Gardens Cape Town P.O.Box 36556 Chempet 7442 Cape Town	Tel. +27 21 552-9820 Fax +27 21 552-9830 Telex 576 062 cfoster@sew.co.za
	Durban	SEW-EURODRIVE (PROPRIETARY) LIMITED 2 Monaco Place Pinetown Durban P.O. Box 10433, Ashwood 3605	Tel. +27 31 700-3451 Fax +27 31 700-3847 cdejager@sew.co.za
	Nelspruit	SEW-EURODRIVE (PTY) LTD. 7 Christie Crescent Vintonia P.O.Box 1942 Nelspruit 1200	Tel. +27 13 752-8007 Fax +27 13 752-8008 robermeyer@sew.co.za

South Korea			
Assembly **Sales** **Service**	**Ansan-City**	SEW-EURODRIVE KOREA CO., LTD. B 601-4, Banweol Industrial Estate 1048-4, Shingil-Dong Ansan 425-120	Tel. +82 31 492-8051 Fax +82 31 492-8056 http://www.sew-korea.co.kr master.korea@sew-eurodrive.com
	Busan	SEW-EURODRIVE KOREA Co., Ltd. No. 1720 - 11, Songjeong - dong Gangseo-ku Busan 618-270	Tel. +82 51 832-0204 Fax +82 51 832-0230 master@sew-korea.co.kr

Spain			
Assembly **Sales** **Service**	**Bilbao**	SEW-EURODRIVE ESPAÑA, S.L. Parque Tecnológico, Edificio, 302 E-48170 Zamudio (Vizcaya)	Tel. +34 94 43184-70 Fax +34 94 43184-71 http://www.sew-eurodrive.es sew.spain@sew-eurodrive.es

Sweden			
Assembly **Sales** **Service**	**Jönköping**	SEW-EURODRIVE AB Gnejsvägen 6-8 S-55303 Jönköping Box 3100 S-55003 Jönköping	Tel. +46 36 3442 00 Fax +46 36 3442 80 http://www.sew-eurodrive.se jonkoping@sew.se

Switzerland			
Assembly **Sales** **Service**	**Basel**	Alfred Imhof A.G. Jurastrasse 10 CH-4142 Münchenstein bei Basel	Tel. +41 61 417 1717 Fax +41 61 417 1700 http://www.imhof-sew.ch info@imhof-sew.ch

Thailand			
Assembly **Sales** **Service**	**Chonburi**	SEW-EURODRIVE (Thailand) Ltd. 700/456, Moo.7, Donhuaroh Muang Chonburi 20000	Tel. +66 38 454281 Fax +66 38 454288 sewthailand@sew-eurodrive.com

Tunisia			
Sales	**Tunis**	T. M.S. Technic Marketing Service Zone Industrielle Mghira 2 Lot No. 39 2082 Fouchana	Tel. +216 79 40 88 77 Fax +216 79 40 88 66 http://www.tms.com.tn tms@tms.com.tn

Turkey			
Assembly **Sales** **Service**	**Istanbul**	SEW-EURODRIVE Hareket Sistemleri San. ve Tic. Ltd. Sti. Bagdat Cad. Koruma Cikmazi No. 3 TR-34846 Maltepe ISTANBUL	Tel. +90 216 4419163 / 4419164 Fax +90 216 3055867 http://www.sew-eurodrive.com.tr sew@sew-eurodrive.com.tr

Ukraine			
Sales **Service**	**Dnepropetrovsk**	SEW-EURODRIVE Str. Rabochaja 23-B, Office 409 49008 Dnepropetrovsk	Tel. +380 56 370 3211 Fax +380 56 372 2078 http://www.sew-eurodrive.ua sew@sew-eurodrive.ua

United Arab Emirates			
Sales **Service**	**Sharjah**	Copam Middle East (FZC) Sharjah Airport International Free Zone P.O. Box 120709 Sharjah	Tel. +971 6 5578-488 Fax +971 6 5578-499 copam_me@eim.ae

USA			
Production **Assembly** **Sales** **Service** **Corporate Offices**	**Southeast Region**	SEW-EURODRIVE INC. 1295 Old Spartanburg Highway P.O. Box 518 Lyman, S.C. 29365	Tel. +1 864 439-7537 Fax Sales +1 864 439-7830 Fax Manufacturing +1 864 439-9948 Fax Assembly +1 864 439-0566 Fax Confidential/HR +1 864 949-5557 http://www.seweurodrive.com cslyman@seweurodrive.com
Assembly **Sales** **Service**	**Northeast Region**	SEW-EURODRIVE INC. Pureland Ind. Complex 2107 High Hill Road, P.O. Box 481 Bridgeport, New Jersey 08014	Tel. +1 856 467-2277 Fax +1 856 845-3179 csbridgeport@seweurodrive.com
	Midwest Region	SEW-EURODRIVE INC. 2001 West Main Street Troy, Ohio 45373	Tel. +1 937 335-0036 Fax +1 937 332-0038 cstroy@seweurodrive.com
	Southwest Region	SEW-EURODRIVE INC. 3950 Platinum Way Dallas, Texas 75237	Tel. +1 214 330-4824 Fax +1 214 330-4724 csdallas@seweurodrive.com
	Western Region	SEW-EURODRIVE INC. 30599 San Antonio St. Hayward, CA 94544	Tel. +1 510 487-3560 Fax +1 510 487-6433 cshayward@seweurodrive.com
	Additional addresses for service in the USA provided on request!		

Venezuela			
Assembly **Sales** **Service**	**Valencia**	SEW-EURODRIVE Venezuela S.A. Av. Norte Sur No. 3, Galpon 84-319 Zona Industrial Municipal Norte Valencia, Estado Carabobo	Tel. +58 241 832-9804 Fax +58 241 838-6275 http://www.sew-eurodrive.com.ve ventas@sew-eurodrive.com.ve sewfinanzas@cantv.net

Vietnam			
Sales	**Ho Chi Minh City**	Nam Trung Co., Ltd 91 - 93 Tran Minh Quyen Street, District 10, HCMC	Tel. +84 8 8301026 Fax +84 8 8392223 namtrungco@hcm.vnn.vn

Index




SEW-EURODRIVE
Driving the world

SEW-EURODRIVE GmbH & Co KG
P.O. Box 3023
D-76642 Bruchsal/Germany
Phone +49 7251 75-0
Fax +49 7251 75-1970
sew@sew-eurodrive.com

➞ **www.sew-eurodrive.com**